Crystal Island Creations Development Strategy

A SELECTION OF TECHNOLOGY FOR THE UPCOMING PRODUCT RELEASE

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ABSTRACT

Crystal Island Creations (CIC), founded in 1996, is a privately held California based general partnership, which specializes in interactive media, namely video games.

Since its inception, CIC has chosen different platforms depending on the market trend. In 1999, a single player side-scroller was chosen as the first project for the PC platform. Today, the development continues on the first project. Because this is only a part-time venture, the development lifecycle becomes exceptionally long. The time has come to make a go/no-go decision. The options are simple, does CIC continue with their current project, which, admittedly, is an older technology, or does it consider the current project as sunk costs and move to one of two basic alternatives.

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BACKGROUND

Crystal Island Creations was founded in 1996 by a group of four partners. The partnership was established to participate in the multi-billion dollar video gaming industry. Originally formed as a video game developer for the 3DO Company, due to a number of industry trends, including the fall of the 3DO console, the target platform changed to the personal computer in 1999. In order to save some development time, CIC chose to continue the development of their original project, a side scroller. Although all of the code had to be redeveloped, most of the artwork could be salvaged with minor modifications. The current project was then underway.

Today, development continues for the personal computer, however, the existing partners, now down to two, must determine whether the current strategy is the best strategy, or should a different direction be chosen. Because the development is done on a part-time basis, the time to complete the project more than quadruples. This time-to-market is but one of the objectives under consideration. And, although much time and cost has gone into the current project, those should be considered sunk costs with regards to the future direction.

GOAL

To determine the best course of action pertaining to upcoming video game development.

OBJECTIVES

The objectives for the future technology decision were derived from two major influences:
- The competitive market
- The latest trend to migrate towards Internet technology

In order to meet these challenges, the major objectives for the new technology platform are:

- **Return on Investment (ROI)**
  For a given use of money in an enterprise, the ROI (return on investment) is how much "return," usually profit or cost saving, results. An ROI calculation is sometimes used along with other approaches to develop a business case for a given proposal. The overall ROI for an enterprise is sometimes used as a way to grade how well a company is managed. The sub-objectives identified for ROI are:

  - Post Production Income
  - Initial Sales Income
  - Support Costs

- **Cost**
  Cost is simply the expediture associated with each of the individual alternatives as an outflow of cash. The sub-objectives identified for Cost are:

  - Human Resources
  - Hardware
  - Production
  - Post Production/Hosting

- **Time To Market**
  Time To Market is the amount of time it will take to actually take the product through to fruition. The sub-objectives identified for Time To Market are:

  - o "Partner"-ability
  - o Resource Availability
  - o Development Lifecycle

- **Branding**
  Branding is the association of the company name with the product and is the process of creating and disseminating the brand name. This ties closely with the popularity of the game. Branding can be applied to the entire corporate identity as well as to individual product and service names.

- **Funding Acquisition**
  Funding acquisition refers to the ability to acquire funds for the alternatives in question. In order to successfully complete and distribute the game, funding must be made available.

ALTERNATIVES

There are three alternatives to be considered:
- Continuation with the current side-scroller project
- Develop a new single player first-person perspective game
- Develop a multi-player network or internet based game.

The continuation of the existing project is self explanatory; no strategic shift at this point in time.

Development of a new single player first-person perspective game consists of new skill sets along with a fresh start. This also means that all work accomplished to date would be discarded. The strategy behind this alternative is that the game would fall into the genre of existing popular games today. The trick would be to formulate a concept to enable the product to stand out amongst all the existing games today. There would need to be a lot of time spent up front in the conceptual and design phases. This would then be followed by the development and deployment phases. In relation to the existing product, this new strategy would add more time due to the need for new up front planning. The existing product has already passed that phase.

Development of a multi-player network or internet based game consists of both new skill sets and new hardware requirements. Because this is the latest technological direction, the skills will be hard to find and will probably have to be home grown. This alternative should have the greatest profitability potential but the most difficult to develop. As with the new design of a single player first-person game, this effort would have to start from scratch meaning that the entire lifecycle would need to be traversed.

DECISION PROCESS

The decision process consists of numerous steps. The first step is to identify the demographics for the different alternatives. Who is the target audience? Does this audience fit the targeted platform? Another step is to evaluate the hardware and software requirements. CIC already has the hardware and software in place for the continuation of the existing project, however, an understanding of the requirements for the other two alternatives is necessary for making educated decisions in this area. In addition to the hardware and software resources, the human resources must be evaluated. Can the existing staff handle the demands of the other alternatives or will new resources be necessary? Additionally, evaluation of alternative technologies must be made for the feasibility of each alternative.

In addition to the demographics mentioned above, a marketing assesment must also be made to ensure that a customer demand exists for each alternative. Consideration must also be given to costs associated with the game production and post-production. Each alternative will have different costs in these areas. Funding considerations will also be taken into consideration as investors will be more willing to fund certain game genres over others. Finally, for each alternative, an ROI assesment must be made.

RESULTS

This section presents the Expert Choice decision hierarchy that shows the alternatives and objectives with respect to the goal.

Time-to-Market

The first objective evaluated was Time-to-Market (Figure 1). The results indicate that the most favorable choice is to continue with the existing project. This makes sense as the early phases of the lifecycle are already complete whereas the other two alternatives would have to complete the entire lifecycle starting from the beginning.
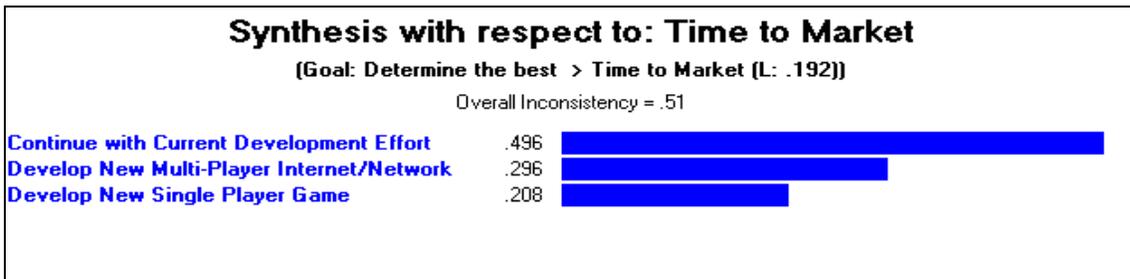
Synthesis with respect to: Time to Market

(Goal: Determine the best > Time to Market (L: .192))

Overall Inconsistency = .51

Continue with Current Development Effort	.496
Develop New Multi-Player Internet/Network	.296
Develop New Single Player Game	.208

Figure 1

The three sub objectives of Time-to-Market are:

"Partner"-ability

Figure 1.1 shows that the second alternative, "Develop New Multi-Player Internet/Network Game" was the most favorable alternative (70%). Since the internet-based games are the most populer ones in the market, it will be easier to find a partnership with another interactive company or distributor, if the company is up to date with the market trend. Unfortunately, continuing with current technology presents little chance of partnering due to the older technology in use.

Continue with Current Development Effort	.084
Develop New Multi-Player Internet/Network Game	.705
Develop New Single Player Game	.211

Figure 1.1

Resource Availability

Figure 1.2 shows that the first alternative, "Continue with Current Development Effort" was the most favorable (69%) among all three alternatives. The software, hardware and the skill-set for the current development is already in place. So, in terms of resurce availability, it makes most sense not to adapt a new technology.

Continue with Current Development Effort	.687
Develop New Multi-Player Internet/Network Game	.069
Develop New Single Player Game	.244

Figure 1.2

Development Lifecycle

Figure 1.3 shows that the first alternative, "Continue with Current Development Effort" was the most favorable (71%) among all the three alternatives. The development life cycle will be much shorter if the company decides to continue using the existing technology and no time is spent getting up to the speed with the new technology.

Continue with Current Development Effort	.709
Develop New Multi-Player Internet/Network Game	.113
Develop New Single Player Game	.179

Figure 1.3

ROI

The second objective evaluated was ROI (Figure 2). The results (Figure 2) indicate that the most favorable alternative is to Develop New Multi-Player Internet/Network game. This was most likely due in large part to the great demand for multi-player games in today's market. Although there is a existing niche for the current development project, the popularity of multi-player network games provide for a much greater ROI

Synthesis with respect to: ROI ($)

(Goal: Determine the best > ROI ($) (L: .500))

Overall Inconsistency = .03

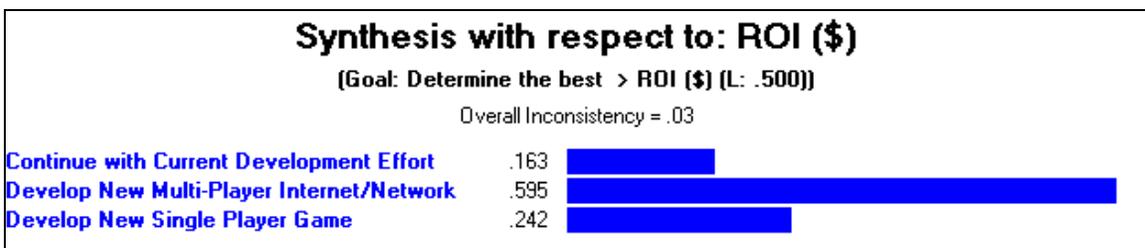|	
Continue with Current Development Effort	.163
Develop New Multi-Player Internet/Network	.595
Develop New Single Player Game	.242

Figure 2

The three sub objectives under ROI are:

Post Production Income

Figure 2.1 shows that the second alternative, "Develop New Multi-Player Internet/Network Game" was the most favorable (60%) among all three alternatives. Because of the popularity of the Internet/Network based games, the projected post production income is higher than the other two alternatives. Post Production income include such things as, books, merchandise, multi media etc.

Continue with Current Development Effort	.200
Develop New Multi-Player Internet/Network Game	.600
Develop New Single Player Game	.200

Figure 2.1

Initial Sales Income

Figure 2.2 shows that the second alternative, "Develop New Multi-Player Internet/Network Game" was the most favorable (69%) among all three alternatives. Because of the popularity of the Internet/Network based games, the projected Initial Sales income is higher than the other two alternatives. Initial Sales Income consists of the income from the sale of the game itself as opposed to future merchandisery considerations.

Continue with Current Development Effort	.069
Develop New Multi-Player Internet/Network Game	.687
Develop New Single Player Game	.244

Figure 2.2

Support Cost

Figure 2.3 shows that the first alternative, "Continue with Current Development Effort" was the most favorable (49%). Since the maintenance cost for an internet based software is higher than any stand alone software, it will be more expensive to support the Internet based game. Additionally, there will be costs associated with hosting whether hosting occurs inhouse or through a third party.

Continue with Current Development Effort	.444
Develop New Multi-Player Internet/Network Game	.111
Develop New Single Player Game	.444

Figure 2.3

Branding

The next objective evaluated was Branding (Figure 3). Branding is the association of the company name with the product. This ties closely with the popularity of the game. Due to the great popularity of multi-player games, it is not surprising that the alternative to Develop New Multi-Player Internet/Netowrk game was the most favorable. The current development project, due to the older technology being used, is the least favorable with respect to branding.
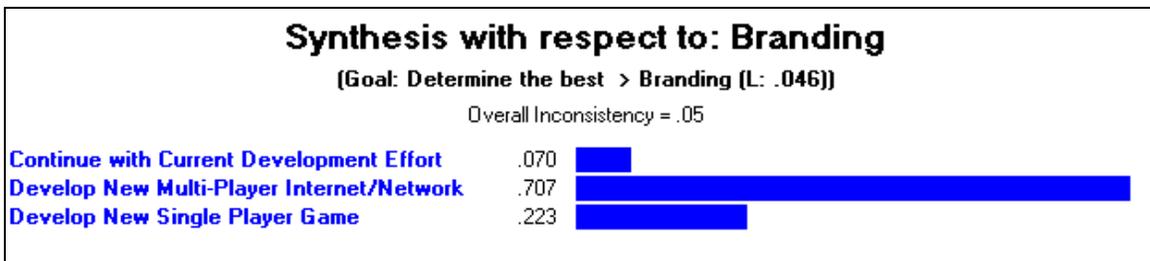

Synthesis with respect to: Branding
(Goal: Determine the best > Branding (L: .046))
Overall Inconsistency = .05

Continue with Current Development Effort	.070
Develop New Multi-Player Internet/Network	.707
Develop New Single Player Game	.223

Figure 3

Cost

The next objective evaluated was Cost (Figure 4). Cost was simply the expeditures associated with each of the individual alternatives. As anticipated, the alternative to Continue with Current Development Effort, was most favorable with respect to cost because up-front costs are already invested and no new up-front spending will be required. However, the other alternatives have potential up-front costs in addition to any production and post-production costs.
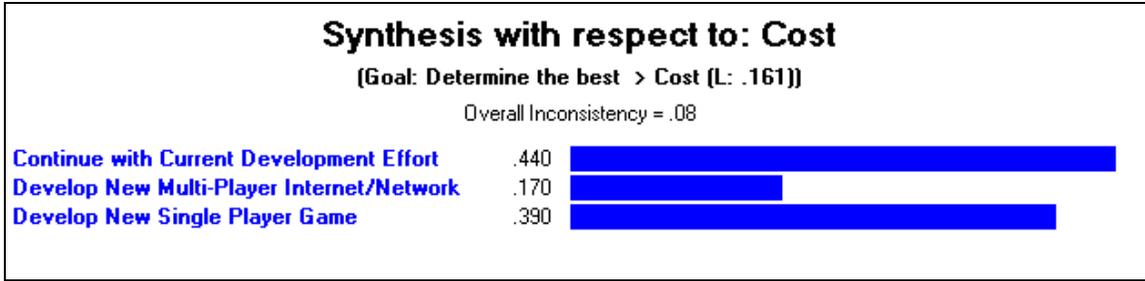
Synthesis with respect to: Cost

(Goal: Determine the best > Cost (L: .161))

Overall Inconsistency = .08

Continue with Current Development Effort	.440
Develop New Multi-Player Internet/Network	.170
Develop New Single Player Game	.390

Figure 4

The four sub objectives under Cost are:

Human Resource

Figure 4.1 shows that the first alternative, "Continue with Current Development Effort" was the most favorable (49%). The existing employees have the skill set to continue with the current development. For any change in the technology, the company will have to spend money on hiring new resouces or training the current employees in the new technology. Because of the highly technical requirements of the new multiplayer development, that alternative was the least favorable.

Continue with Current Development Effort	.493
Develop New Multi-Player Internet/Network Game	.196
Develop New Single Player Game	.311

Figure 4.1

Hardware/Software

Figure 4.2 shows that the first alternative, "Continue with Current Development Effort" was the most favorable (54%). If the company decides to move to a new technology, there will be additional hardware and software acquisition cost. This makes the second and third alternative, "Develop New Multi-Player Internet/Network Game" and "Develop New Single Player Game" more expensive than the first one.

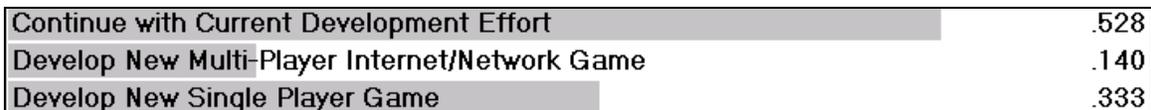|	
Continue with Current Development Effort	.528
Develop New Multi-Player Internet/Network Game	.140
Develop New Single Player Game	.333

Figure 4.2

Production

Figure 4.3 shows that the the first (Continue with Current Development Effort) and the third (Develop New Single Player Game) alternative, are the most favorable ones (40%). Since there are initial set up costs associated with server hosting and other hardware and software setup for Internet/Network based software, the Production cost is higher.

Continue with Current Development Effort	.400
Develop New Multi-Player Internet/Network Game	.200
Develop New Single Player Game	.400

Figure 4.3

Post-Production/Hosting

Figure 4.4 shows that the the first alternative, "Continue with Current Development Effort" is the most favorable one (46%). The Post-Production cost, associated with current development is most favorable because there is no hosting requirement and due to the simple technology, minimal support is anticipated. Due to the complexity of the newly designed games and hosting of the servers, the maintenance cost will be higher.

Continue with Current Development Effort	.458
Develop New Multi-Player Internet/Network Game	.126
Develop New Single Player Game	.416

Figure 4.4

Funding Acquisition

The final objective evaluated was Funding Acquisition (Figure 5). Funding acquisition refers to the ability to acquire funds for the alternatives in question. The different alternatives will have different liklihoods for acquiring funds based on a number of factors including marketability etc. As anticipated, due to the popularity of multi-player games, the alternative to Develop New Multi-Player Internet/Network games has the most favorable rating.
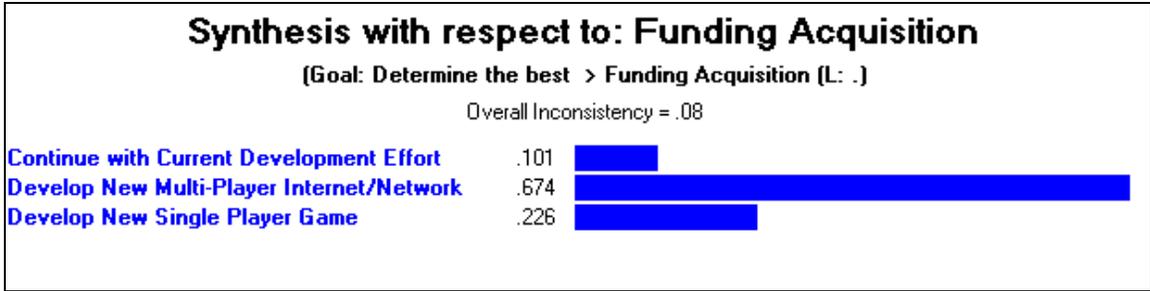
Synthesis with respect to: Funding Acquisition

(Goal: Determine the best > Funding Acquisition (L: .)

Overall Inconsistency = .08

Continue with Current Development Effort	.101
Develop New Multi-Player Internet/Network	.674
Develop New Single Player Game	.226

Figure 5

CONCLUSIONS

The most favorable alternative, ignoring sunk costs, is to begin a new development effort consisting of a multi-player internet/network game (Figure 6). The other two alternatives, Continue with Current Development Effort and Develop New Single Player Game, were very similar with respect to the overall favorability. The alternative of developing a new multi-player internet/network game was most favorable in three out of the five objectives measures (Figure 7), including the most significant objective, ROI. However, this alternative was the least favorable in the second most significant objective, Cost. In the three objectives that the new development of a multi-player game appeared most favorable, the gap between this objective and the other two was substantial. Relatively speaking, in the two objectives in which the new multi-player development was not the most favorable, the three objectives were close.

Due to the results presented, Crystal Island Creations has now decided to take a hard look at shifting from the current development effort to the development of a new multi-player internet game. Although no decision has yet been made, serious considerations are being given to the new development. An appreciation of the process and the Expert Choice tool was apparent. It is difficult, however, to accept the fact of sunk costs with respect to the current development project. At this time, the decision has been tabled until after the E3 convention (Electronic Entertainment Expo) in early May. The company is looking for final confirmation that the judgements made were realistic. The largest industry convention will serve to confirm these judgements. At a minimum, this effort serves to push the decision-makers to take a hard look at their strategy both internally and externally.
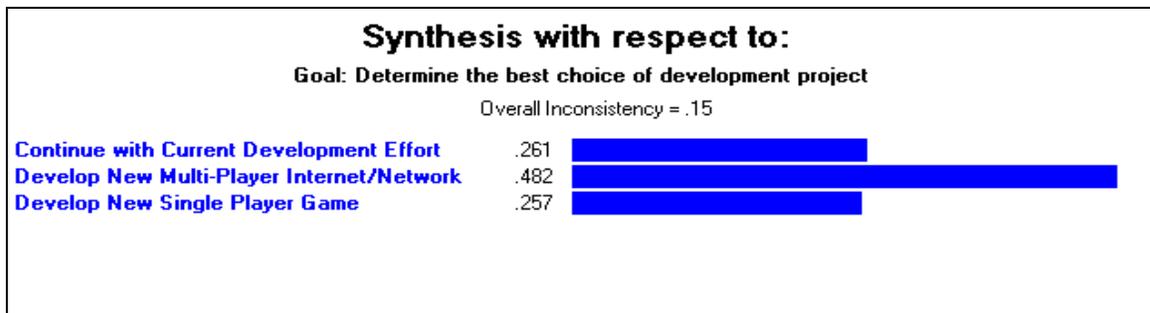

Synthesis with respect to:

Goal: Determine the best choice of development project

Overall Inconsistency = .15

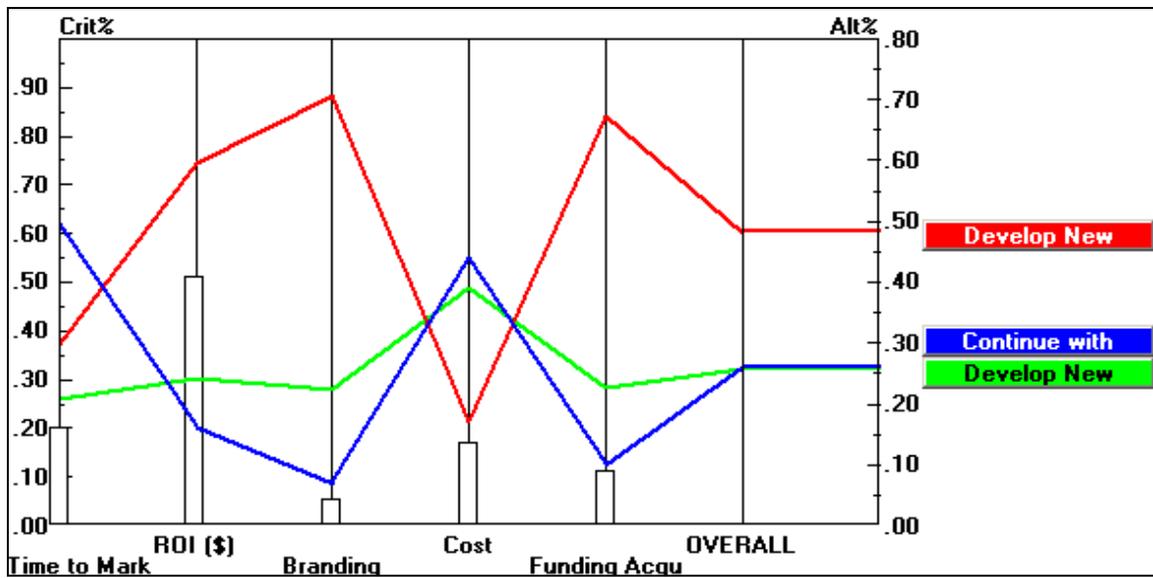|	
Continue with Current Development Effort	.261
Develop New Multi-Player Internet/Network	.482
Develop New Single Player Game	.257

Figure 6

Figure 7

<u>BIBLIOGRAPHY</u>

1. Ernest Forman and Mary Ann Selly, Decision by Objectives (How to convince others that you are right), Manuscript, Spring 2001.
2. Expert Choice Tutorials, Introduction to Expert Choice, Expert Choice 2000 Enterprise.
3. Saaty T.L, The Analytic Hierarchy Process, New York, N.Y., McGraw Hill, 1980, reprinted by RWS Publications, Pittsburgh, 1996.