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## **INTRODUCTION**

In 2001 thequality.com released *Horses for Courses*, a digital entertainment title that could be viewed, in a passive sense, as a film, or that could be manipulated in a variety of ways like a computer game, or toy. You controlled the camera to explore the world of the story, had characters react to your presence, bought merchandise, and affected the story. The aim of this feasibility study is to investigate certain concepts that represent further developments in this general style of entertainment – a style which embodies some aspects of watching a film, and some aspects of a computer game. It explores how you play a film and how you watch a game as “online film”.

The study will deliver a written report into the viability of products for online film consumers, online film developers and online film managers. The report will clarify the proposition for a novel evolution of the home cinema experience. A film DVD customer uses the DVD almost like a musical instrument; “performing”, “re-mixing”, and “sharing” the experience with other DVD owners via online equipment. The report assesses commercial opportunities for thequality.com in designing software products to support this experience.

The study is needed to gain intelligence, and promote an industry profile in order to capitalise on a potentially new approach to online entertainment. It will lend credibility and increase investor confidence in a related project, the development of an online film consumer title. thequality.com develops concepts that rely on the kind of products considered in this study, products that don’t neatly fit inside an existing market but are relevant to the growing “music/rhythm” computer game market, in which the aim is to do something to rhythm and music. The idea is that there is an untapped audience over and above the “hardcore” computer game market for casual computer entertainment. Products more appealing to women is a potential outcome. In trials with “non-gamers” (people with no interest in computer games), music-themed computer entertainment has been surprisingly attractive, perhaps attributable to its emphasis on incidental fun rather than complex goals. The feasibility study will test our view that there is an opportunity for early movers to partner with major entertainment brands in developing an exciting evolution of the film experience, more akin to live performance (e.g. as in a band, DJing, VJing) than traditional computer gaming. This project complements over six years of creative/technical research and prototyping of online films.

The project will cost £60,000 and take six months. 15% will be internal costs. Work is based at existing premises in central London and at a central London usability lab.

This experience has never been attempted before, a novel hybrid of computer game and film entertainment. Without a government award, it will be hard to capitalise on this idea and gain a first mover advantage. A SMART-funded study provides a measure of technical assurance to investors in DVD entertainment. Without this, the project would likely resort to US funding of the proposition. Similar projects in the past have been hamstrung in the US by short-sighted marketing, resulting in “safe” products, prohibited from exploring the line between film and game. Both the film and game industries acknowledge that innovation is needed to open new markets but projects rarely have the freedom to innovate when funded directly by the industries concerned.

Any remaining project costs will be funded through the consulting revenue of thequality.com. *Horses for Courses*, the award-winning experimental online film which inspired this proposal, was funded entirely in-house, for £10,000, in 2001.

## TASKS

Here are the key tasks in the feasibility study:

- **Experimental Mock-up development**

The experience and proposition documentation (available on request) will be converted into a series of diagrams and sketches to clearly convey to the project team what is being proposed as an experience. These mock-ups will be maintained up-to-date, as a communications tool, throughout the project but the principle effort will be up front.

- **Team review of proposition and consumer experience**

After visualising the experience in the previous stage, this is an opportunity to refine the proposition with the input of the new project team. This retains the central premise that the products enable a film to be manipulated by its audience in a way that the film business models can learn from the computer game industry, in terms of creating new two-way relationships with an audience. Computer games explore, to commercial success, ways of giving the audience greater control over the experience (e.g. through the *Quake* and *Unreal* game level editors, interchangeable *Pokémon* characters).

The review will conclude with the drafting of a set of product requirements at different priority (i.e. must have, should have, could have, would be nice but no time).

*RISK: Review is not conclusive within time-frame and budget*

*The review will seek to emphasise the short term exploitation of key ideas, and cost-effective business opportunities in which to develop them, alongside the big picture of how to pioneer online film production. While the project could consider audio and visual manipulation of the film, it will concentrate on audio (i.e. soundtrack) manipulation as this aspect is the most relevant to an existing market – “music” computer games and is arguably the most technically feasible.*

*RISK: Unearthed issues during the project mean that the business case is not conclusive*

*Rapidly-changing online business models and the present economic climate may impact on the project’s overall viability. The methodology used (e.g. “must have, should have, could have and would have” priorities to every element of the proposition) is intended to circumvent this.*

- **Define the market**

Based on the online entertainment proposition, we describe the people who will need or want the products and how these people relate to existing markets.

*RISK: Existing patents block commercial exploitation of the idea*

*There may be patents which impinge on this concept, but none have been found to-date that are sufficiently binding. The project team has experience of technology patenting and will carefully analyse existing IPR to verify whether there are any clear paths to commercial exploitation.*

*RISK: Team member unavailability in the study time-frame*

*The project relies partly on external expertise. The availability of advisors may not synchronise adequately with project timeframes. To offset this, thequality.com is already in regular contact with the advisors to track their ongoing availability.*

- **Technology analysis**

Major proprietary software vendors, as well as open source software technologies, will be explored for commercial viability. Candidates for patent research will be highlighted at this phase.

*RISK: Support not forthcoming from key vendors*

*The consumer product must run on 3<sup>rd</sup> party platforms (e.g. the Microsoft XBox computer game console). Conclusions may depend on information not forthcoming from vendors for various reasons. All the key vendors are headquartered overseas which may hinder communication. Project team members have been chosen for their existing relationships with key vendors.*

- **Consumer product technical architecture definition**

The technology required to create the customer experience is summarised here. The study is focused on products which support the experience. It is not focused on the viability of any particular online film title.

*RISK: The concept may be unfathomable without a compelling film demo*

*thequality.com has developed a online film script property, ten weeks in the head bin, in parallel to this project. Creative and business ideas can be exchanged. Creative input (and sample content) from this project can be fed into this phase of the project. The separation of our creative film development project and this generic product feasibility project is to minimise risk for investors and to facilitate funding of discrete components.*

- **Management product technical architecture definition**

The online content management component of the experience will be defined here. This will include processes for brokering communications between DVD owners, publishing and storing of audience contributed "mixes", and product registrations.

*RISK: Technical options do not adequately support the proposition*

*The business case for exploitation and development of the idea may be blocked on cost grounds. There is evidence however that the film and game industries are slowly accepting the idea of producing multi-faceted entertainment projects (for entry into multiple markets) with higher up-front costs in order to save costs overall and*

*maximise re-usability of key assets (e.g. celebrity cast, locations, crew). E.g. The Matrix films and game productions all written and directed by the same team in parallel (i.e. Matrix Reloaded film/Matrix Revolutions film/Enter the Matrix game). The challenge will be to develop and support an ingeniously compelling user experience that can be funded in the current climate. Production cost estimates will determine whether an interactive short film pilot, based on this study, is viable.*

- **Identify the competition**

Based on the above definitions, we look at who and where there are competing products and services. These will likely come from the computer game industry sector, not the film industry sector.

- **Patent research**

Patent candidates be scrutinised to determine whether there are clear routes to patenting components of the idea in the UK, in Europe, and in the US.

- **Usability testing**

The mock-ups, from the initial phase, will be tested by sample customers selected by the usability advisor to study and record responses to the entertainment concept. The experience will be tested by groups and in a solo context. Single gender and mixed gender group dynamics will be observed.

*RISK: Mock-up development is not completed due to necessary scope creep*

*In order to adequately convey the customer experience, it may be necessary to continue development beyond what the timescale and budget allows. Compromises made due to this issue may lead to the following risk.*

*RISK: Usability research is inconclusive based on mock-ups*

*Usability testing works best in a regular iterative cycle. There may be insufficient budget to commission sufficient rounds of testing to reach firm conclusions.*

*RISK: The mock-ups are not sufficiently detailed*

*The mock-ups will need to be produced quickly and yet no compromises can be made in production terms. The challenge will be to construct a "wire-frame" experience that adequately conveys the strength of the idea. Rapid prototyping of creative/technical ideas is one of the company's key strengths. The team has been selected to facilitate this process.*

- **Writing of feasibility report**

All findings from the above tasks will be documented, together with a revised business case. The target audience for this report will be investors, as well as film industry and music industry executives. The opportunities for sales and market share will be clearly identified.

*RISK: Marketing of the interactive concept*

*"Interactive narrative" and "Interactive movies" are widely perceived as failed ideas. "Online film" is being used as a replacement term but the legacy of earlier approaches remains a marketing challenge, particularly within the film industry. However, the proposition is a refinement of earlier ideas, taking onboard key lessons learned. E.g. the consumer product will not permit the film plot to be manipulated.*

## PROPOSED METHODOLOGY

A formal project management methodology often used for rapid software engineering projects will be employed. This methodology assumes that project definitions will change and provides processes for managing that risk. The core team will monitor key industry information sources during the project to ensure that late breaking industry developments are fed into the study. Where appropriate, market research will be bought rather than compiled by hand to save time. The core team will use of thequality.com web publishing systems for internal communication.

## PROJECT TEAM

The core team (positions 1 -4) will make use of their industry experience as well as key external advisors. The project role titles correspond to those used in a standard project management methodology.

1. **Visionary/Project Manager** – Michela Ledwidge
2. **Technical Consultant** – Dr. Mick Roberts
3. **Technical Designer/Scribe** – Kam Memarzia
4. **Project Assistant** – Tamara Kaye
5. Advisor (**usability**) – Ross Phillip (User Vision)
6. Advisor (**audio**) – John Broomhall (johnbroomhall.co.uk)
7. Advisor (**graphics and animation**) – Damon O'Connell (thequality.com)
8. Advisor (**Soundtrack**) – Aphex Twin (Warp Records)

## THE MARKET AND MARKET POTENTIAL

### ONLINE FILM CONSUMER PRODUCT ("the DVD")

It is not certain at this stage whether the film DVD retail market or the computer console game retail market will be the target market for the consumer product. There are no products of this kind competing in either market. The most relevant markets (in terms of the technology) are the computer entertainment product markets in North America and in Western Europe. Other labels for these markets include "interactive leisure software", "interactive entertainment", and "multi-media consumer software".

Market drivers for computer entertainment include the wider availability of broadband internet, next-generation game consoles (i.e. Sony PS2, Microsoft XBox, Nintendo GameCube) and marketing to an increasingly broad demographic.

The most specific market being considered for the consumer product is the computer console game retail market for "rhythm games". The study will also explore how the consumer product could compete within the following markets.

- feature film DVD retail

- consumer software retail
- music video retail
- arcade game retail

The computer game markets in the US and Europe are currently experiencing solid growth. The European game console software sales for 2003 are estimated at \$3.4billion (see the following table for the trend). The total US console and handheld software revenue grew 10% in 2003 to \$6.4billion.

CONSOLE SOFTWARE SALES (US\$ MILLIONS)

	2000	2001	2002E	2003E	2004E	2005E	2006E
<b>North America</b>	3866	4546	5779	6380	4610	2808	1351
<b>Europe</b>	2309	2473	3105	3360	3089	2336	1636

Source: International Development Group, [www.idgconsulting.com](http://www.idgconsulting.com)

It is difficult to obtain figures on the size of the "rhythm" computer game retail market. Konami, the leading publisher in this market, does not release separate sales figures for this genre. Until recently, the accepted wisdom was that this type of product only sold well in Japan. However recently there has been a sharp increase in the number of titles produced specifically for the North America and Europe markets. The markets are growing, arguably due to the uptake of internet broadband in these regions, a driver for many new forms of communications-based entertainment.

E.g.

- Codemaster's No. 1 UK Christmas release, a rhythm game based on the Pop Idol franchise (press release April 4, 2003)
- Karaoke Revolutions (press May 14, 2003), online karaoke game
- XBox Music Maker (press May, 2003), online DJ game

In 2001, the combined rental and retail sales of the UK film industry reached £1.99 billion, up 35% on 2000. The North American and Western European market for PC, console and handheld game software was £6.1 billion. Western Europe was expected to account for 34% of this market in 2002 and continue to increase in percentage. Around 45% of PC game revenues came from Europe in 2001 and 2002. The most successful titles were franchises exclusive to one game platform. In 2001, a top 5 console game sold around 1,000,000 units in the US and 175,000 units in the UK. A top 100 console game in the same period sold around 70,000 units in the US and 14,000 units in the UK.

#### ONLINE FILM DEVELOPMENT PRODUCT ("the tool")

The target market is the "game development software" market. There are no direct competitors to the product in this market because the envisaged consumer product does not exist yet. The market is the largest for 3D modelling and animation software as a result of the trend in computer games towards 3D visuals. Given the noticeable trend towards more music-related computer games, the potential market could explode for tools that enable new (and more importantly, existing) films to be re-released in a format that allows them to be manipulated by the audience. Estimates put this as being a 500 million dollar market.

The exploitation route for developing products in this market will be to target the top five US film studios, on the basis of successful piloting and prototyping of the quality.com content, and secure business in developing online film treatments of major film productions.

## ONLINE FILM MANAGEMENT PRODUCT ("the server")

The target market is the "IP-based applications services" market which provides technology and technical processes for services over the internet. Again there are no direct competitors operating in this market. The nearest approximation to the service are those that exist in the market for online game management which is relatively small but is expanding to meet increased demand for online gaming. Services are usually provided in-house by game publishers using licensed projects.

The potential market could explode in similar fashion to the web content hosting market which grew exponentially in 1994 as a result of de-regulation of the internet. Estimates based on the volume of film content produced annually put this being a billion dollar market.

The exploitation route for developing products in this market will be to target the top five US film studios, on the basis of successful piloting and prototyping of thequality.com content, and secure business in out-sourced management of online film treatments of major film productions.

## THE COMPETITIVE EDGE

Many entertainment markets regularly tout the Internet-enabled experience as a key selling point. Nevertheless, there is no equivalent to *film language* for Internet titles. We predict that breakthroughs in the evolution of interactive entertainment will come from smaller more flexible companies than the mass market film and game industries. The collapse of the dotcom sector can be viewed as an opportunity for the remaining internet companies.

Relatively few internet companies have concentrated on the development of narrative content and the technical experience and expertise to design the required architecture. thequality.com has a track record in this area, as evidenced by the ongoing work Michela Ledwidge is doing within BAFTA, NESTA, and DTI. With the current generation of computer gaming technology, there is an opportunity to expand the concept of "computer game" to other forms of play that open up the experience to new audiences. To do this, entertainment projects need to be sympathetic to the reality that the computer game market, as currently defined, is exceedingly narrow, stereo-typically defined as appealing to the "fourteen year-old boy mindset". Striking a new balance between entertainment and meaning is a challenge that has been left open for some time with little investment in new ideas.

For the last ten years, thequality.com has developed world-class online content and sustainable services. The key to the product proposition will be a cost-effective approach, that takes unprecedented advantage of converging technology (converging between film, computer game and online technology). It will be demonstrably cheaper than the current mainstream process of films and game tie-ins in parallel. The experience of innovating on small budgets will be an advantage.

A further advantage of the cost-effective approach is that the interactivity may be marketable as a value-add, as opposed to being the focus, allowing titles to be sold as a loss-leader within the consumer DVD player market, as a driver for equipment retail.

Key personnel from across the film and game industries will be another competitive edge.

Michela Ledwidge is a multi-skilled performer with a history of bleeding edge technical innovation and award-winning creativity. Her architectural perspective brings together the creative and technical experience required to helm a project of this scale. The producer has been preparing the groundwork for this project for ten years, through a varied career as a film-maker, writer, musician, developer, open source evangelist, and web3d pioneer, and technical designer. Her approach is described as "next-generation film-making" in Web 3D: New Perspectives (ISBN: 0789308150 published by Universal Books 2002).

Dr. Mike Roberts is a leading expert on large-scale entertainment systems, until recently a key advisor to Hollywood entertainment companies on audio/visual programming and computer network services. Dr Robert's commercial credits include the Kinetix Hyperwire Java component development system and several US patent applications. He received his Ph.D. "Visual Programming for Transputer Systems" from London's City University in 1990.

John Broomhall is the UK's leading audio producer for computer games with credits on over fifty released titles. His expertise will ensure that the study takes full account of all industry developments, including the Pop Idol computer game, for which he is Audio Producer.

The key competitive edge is that this is a novel, yet intuitive in hindsight, idea waiting to be produced. It is standard practice within the games industry to enable users to add their own content into the game experience. This is commercially beneficial because it extends the shelf life of the product by several years. This approach has not been attempted with narrative content such as film titles.

At the same time, there is recent evidence to suggest a market for products that enable the re-cycling of existing entertainment titles. Steven Spielberg has announced that he is to re-release old movies that have been "re-sampled" using modern technology, effectively enabling new stories and actors to be inserted into familiar movies.  
([http://www.filmandvideomagazine.com/2003/02\\_feb/news/dreamworks0214.htm](http://www.filmandvideomagazine.com/2003/02_feb/news/dreamworks0214.htm))

The experience thequality.com has in developing its own online film titles gives this project an edge. Even though many mainstream films now exhibit influences from computer games only one production to-date (ie. *The Matrix*) has used computer game technology to help tell the story.

There is an opportunity for thequality.com to be an early mover in this area. In the same way as the Lumère brothers watched the behaviour of side-show alley customers, thequality.com is looking at how customers really interact with online entertainment and adapting the experience to suit.

## **INTELLECTUAL PROPERTY RIGHTS**

All IPR surrounding the online film currently in development, *ten weeks in the head bin*, is currently owned by Michela Ledwidge and thequality.com ltd., of which she is the sole director.

The idea leverages existing development such as

- the *ten weeks in the head bin* screenplay, under development as an animated feature film (est. budget £20million).
- the web3d pipeline (production process) developed for the award-winning web3d short *Horses for Courses*



- open source (i.e. free) technical components for key elements of the user experience (e.g. Jabber for P2P communication, Apache for web services)

The study will test the assertion that it may be possible to protect key IPR for the online film development product and the online film management product by producing and patenting hardware that delivers the experience to other industry sectors (e.g. music store kiosks, arcade game machines, corporate events equipment).

## POTENTIAL SALES

The feasibility study, together with the concurrent project to produce an interactive short film pilot, will clearly demonstrate the business case for a feature length online film experience. The sale of the existing film property *ten weeks in the head bin*, to a film studio conditional on the online film components being included, would be in the \$10-\$40 Million price range. The sales estimate, over the next three years, is \$500,000, based on the development and sales of two feature film properties.

The online film development and management products can be licensed to music industry labels for their acts. The sales estimate, over the next three years, is \$20Million, based on securing first mover advantage.

The online film development and management products can be licensed to educational publishing companies for the delivery of educational narrative video content. The sales estimate, over the next three years, is \$20Million, based on securing first mover advantage.

## BUSINESS HISTORY

thequality.com is a production company that specialises in interactive media and story-telling. It was established in 1993 in Sydney. In November 1993, the company produced the first website in Sydney (1993/11/15 as recorded in <http://archive.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/old-whats-new/whats-new-1193.html>)

In 1997 thequality.com developed and sold an online film property, *ten weeks in the head bin*, to Brilliant Digital.

thequality.com Ltd. was incorporated in the UK in 1998 and has been providing commercial and creative services of relevance to next-generation film-making. <http://thequality.com/create/services.html>

thequality.com's commercial work has been focussed on the design and production management of large-scale online services for clients such as Reuters, the BBC, boo.com, Cap Gemini Ernst and Young, Accenture, and DTI. Since 1999 the company has also been involved in live event production and support for experimental film-makers and live performance artists such as the company's founder, Michela Ledwidge <http://michela.thequality.com>

Three experimental short films have been produced by thequality.com. *bman* (1999), *Grow yer own* (2000), and the award-winning web3d film *Horses for Courses* (<http://thequality.com/horsesforcourses>) in 2001. The latter was the world's first multi-lingual web3d film. In 2002 a paper on the innovative production process (attached) was published at the SIGGRAPH conference.

In 2002, thequality.com re-acquired all rights to the *ten weeks in the head bin* project from Brilliant Digital.

In 2003, thequality.com began providing mentoring and independent advice to the NESTA Fellowship scheme for digital artists.

## **HISTORY OF PUBLIC SUPPORT**

This application is the first time that the company has sought public funding. The business has been investing its own revenue in independent film-making and interactive R&D since 1998.

## **PLAN FOR DEVELOPING THE BUSINESS**

The attached business plan for developing an online film is based on four revenue streams.

- Consulting revenue
- Production services revenue
- Royalties from film and interactive productions
- Licensing of technical innovations

Consulting is the principle revenue stream for the business at present. This feasibility study will act as a driver for new business across the film industry, game industry, music industry, and interactive entertainment industry. The business is investing in training and internal development to support increased revenue through all production services. The company is looking to take on a veteran film producer partner to focus on film industry business development. thequality.com intends to develop next-generation entertainment concepts for in-house production, co-production and product licensing. Leveraging original IPR, and experience with interactive software and service design, the company is seeking co-produce partners to produce interactive services and digital cinema titles. Potential partners include key technology vendors, media channels and distributors.

thequality.com is experienced in online business communication. Past projects have received coverage in The Wall St. Journal, the Sydney Morning Herald, creative arts magazine, and 3D World magazine. The company website and internet platform will be used to develop a high profile for the project. Sample press clippings are attached.

## **EFFECT OF THE PROJECT ON THE BUSINESS**

This project will be a key activity for the company and a key focus for all wider business operations and development. As with previous internal projects, work to generate ongoing consulting revenue (typically through call-out contracts) will not have a detrimental impact. The company intends to use the feasibility study to sound out requirements for developing online film components for internal use, regardless of commercial viability.