Cast Musical Spells.

http://pentagrammusic.com

Pentagram Music Business Plan

MUSIC SHAPER

The magic of music at your fingertips.
EXECUTIVE SUMMARY

Pentagram Music is a new C-Corporation focused on music software product sales. The Pentagram Music Quest is to democratize musical creativity. We will provide a new platform for musical expression, collaboration, creativity and content sharing. Arthur C Clarke said, “Any technology sufficiently advanced will appear to be magic.” The magic of our technology will enable music lovers to cast musical spells. Pentagram Music will target the prosumer music enthusiast. The company will leverage the design skills, music skills, and engineering skills of its staff to establish a niche position as experts in advanced music technologies.

This new music platform will take advantage of three key market-enabling forces—first, the rise of multi-touch. The Apple iPad represents the first 10 finger multi-touch device with deep market penetration. True 10 finger multi-touch solutions are in production for laptop and desktop computing. User acceptance of multi-touch presents an opportunity for a paradigm shift in human-computer interactions.

Second, contemporary web trends have established a proven appetite for creativity, collaboration and sharing tools. Social networking, Youtube, SoundCloud, and blogging are three examples of content sharing technologies with hundreds of millions of users.

Third, Music Software has become a multi-billion dollar marketplace. With the convergence of online content sharing and multi-touch technology, a window of opportunity is opening for an entirely new user experience in music. Pentagram Music will offer a line of software designed to capitalize on this opportunity—graphical, touch based music composition with collaboration and sharing through online communities.

The first offering in the Pentagram Music software line is MusicShaper—an iPad application that translates music theory into a notation of shape and color, allowing the user to easily and intuitively express themselves musically through touch interactions.

The iPad market size is predicted to be 10 million users by year-end. Of all iPad users, 91% bought applications. 45% of these users bought music applications. Assuming a 1% penetration into this market, MusicShaper can generate 1.5 million dollars revenue. This income will be used to move Pentagram Music to the delivery of follow up applications that support the long-term vision for the Pentagram Music platform.

The Pentagram Music platform will consist of a line of products that are estimated to bring in $20M per year in gross revenue by our fourth year. In order to achieve this scale of operations, Pentagram Music is requesting Series A funding of $500k and series B funding of $4M. Series A funding will be used for development of and a marketing campaign for MusicShaper, the first product in the platform. Profits from MusicShaper and Series B funding will be used for the development and marketing of MusicArchitect, and the follow up products in the Pentagram Music Platform. Pentagram Music will follow an IPO exit strategy.
Pentagram Music personnel will consist of staff recruited at Harvey Mudd College, with partners from CodeSource Software Corporation, and Fortyseven communications, an established marketing company with an excellent reputation.

Pentagram Music has competition in the form of Musical DNA—a company who has released a first application of a similar nature. However, Musical DNA fails to deliver a compelling user experience, and is missing key aspects of the geometry and mathematics required to implement a useable application. For MusicShaper, Pentagram Music will leverage its depth of knowledge in the application domain, its experience in software development, and rapid prototyping to develop an excellent user experience. The company will provide software, which encodes a process for songwriting, using a geometric approach that is clear, simple, and functional. No other vendor has released a product that achieves this goal, at this time.

BUSINESS DESCRIPTION

Background

Pentagram music is new C-Corporation focused on software product sales. The Pentagram Music Quest is to democratize musical creativity. We will provide a new platform for musical expression, collaboration, creativity and content sharing. Arthur C Clarke said, “Any sufficiently advanced technology is indistinguishable from magic.” The magic of our technology will enable music lovers to cast musical spells.

Management

Mark Strachan is the CEO of the company and has 20 years of software development experience. He runs a software outsourcing company named CodeSource Software that services Fortune 500 customers in biotech, finance, iDevice, product development, software infrastructure, and supply chain management. The team consists of a group from Harvey Mudd including:

- Chris Ramos – musician, mechanical engineer
- Nicholas Card – systems engineer
- Nicole Cristoso – drummer, physicist
- Harry Wornick – mechanical engineer
- Josh Erhlich – computer scientist
- Anatole Paine – video game developer

We also get support from the following advisors:

- Professor Keller – professor of computer science specializing in Jazz improvisation
- Alexander Francois – providing advice in computer music, industry research
- David Nimitz – interim CFO
- Sibel Sunar – director of Fortyseven communications, will sit on board of advisors and coordinate a marketing campaign
Industry Description and Markets

In the last 20 years, digital signal processing architecture has advanced to the point where real time audio computation is possible on personal computing devices. This has enabled the development of a market for music software appealing to a wide range of customers. This market, known as the prosumer, is computer literate, technology savvy, urban, and sophisticated. These individuals will typically have ambitions to establish themselves socially as artists using any form of expression available. To fulfill their need for social interaction, these users will seek tools to assist them with self-expression. The results of their creativity provide them with personal reward that re-enforces their need for the technology.

The prosumer frequents the internet and already uses a variety of related internet applications and websites. These applications include services such as Bandcamp, SoundCloud, Magnatune, MySpace, and musical video gaming. Bandcamp has a userbase of ~72,500 bands and sells $500,000 worth of music, from which they take a 10-15% cut. SoundCloud has over one million subscribers, the majority of which contribute music to service. MySpace is designed to promote bands, and is a social networking around music with over eight million band pages. Music games such as “Rock Band 2” and “Guitar Hero: World Tour” have online multiplayer communities and sold over five million copies in 2008 alone.

Business Influences

Our technology will depend on a multitouch interface. Multitouch represents a fundamental shift in the way people interact with computers. An entirely new class of applications is about to be written for this technology, and we have the opportunity to get in at the ground floor. Multitouch is a rising market: The Android platform, iPhone, and iPad have established its commercial validity. Microsoft and Apple are introducing laptop and desktop versions of multitouch that will take over the market in the next couple of years. Widespread adoption is coming, and the killer application will be a catalyst for demand.

Target Market

The target market will largely consist of people who have tried to become musically talented, but have ultimately failed to express their creativity. Picture the teenager who wants to write a guitar song for his girlfriend and can't get over the learning curve. Or the avid techno fan who buys a sequencer but can't produce anything interesting or original. What about the college student who enrolls in a music theory course but doesn't get it? These individuals represent the core of our target market. Music writing requires two skills: the ability to translate music into notation, and the ability to understand the rules of music theory. A naïve songwriter can do neither of these without training, unless they have an alternative solution. With our technology, the guitarist gets the girl, the D.J. rocks the house, and the student becomes the master.

Distribution Support Systems

Advertising will be done through a partnership with Fortyseven Communications. Fortyseven Communications is the leading independent video game PR firm, to run a marketing campaign
and promote our software. They represent Warner Brothers, Sony, and Activision. We will use magazine and online advertising, product placement, and targeted reviews using proven strategies developed by Fortyseven Communications.

**Products**

We will develop a line of products and service that will enable the creation, collaboration, and sharing of music. Our software provides this solution to music enthusiasts of all styles and skill levels, allowing them to quickly visualize music and control it with touch. We bypass the traditional pathways to music knowledge, and give the user a visual shortcut to musical composition. Our first product will be MusicShaper, which will be designed for the enthusiast to prosumer. MusicShaper is an iPad application that translates music theory into a notation of shape and color, allowing the user to easily and intuitively express themselves musically through touch interactions.

After MusicShaper we will develop MusicArchitect, which will be a fuller suite of software with more devices. From this we will develop specialized applications that utilize music plugin operation and sound design, orchestration and playback for live performance, and integrate visual performance with stage show. The culmination of these products will result in MusicCommunity, which will be a platform for online collaboration with Pentagram Music components.

**Competitive Advantage**

There are three key benefits and advantages to our technology. First, it makes music theory accessible as a visual language, to music enthusiasts. Next it allows user to architect songs with touch, and promote music as a form of communication that takes the form of shape, color and sound. Lastly, it makes music writing intuitive and fun, with immediate feedback for creative experimentation.

- Look and feel design by a leading industrial designer
- 3D and touch interface, analyzed, reviewed and produced by mechanical engineers
- Music theory ratified and analyzed by musicians with 15 years experience and a highly skilled percussion expert
- Musical geometry identified and enumerated by experts in mathematics

This is the right set of skills for the right domain and the combination of these skill sets presents a unique opportunity to capitalize on the market, with a high quality product.

**Profit Model**

We are selling software, which means our sales are highly scalable. Our costs are linear with our personnel burn rate, and unrelated to number of units sold. We will also spend a finite amount on a marketing campaign, which will generate a return on investment directly related to number of units sold.
Expansion Strategy

The company will produce a first product establishing our position in the marketplace as experts in the domain. The product is intended to be a unique and interesting, functional art form. If the first product is successful, a more capable product and a full scale marketing campaign will be initiated for a line of software. Business units will be established for each offering in the platform, and the company will be expanded to manage the demands of an emerging online community.

Financing Requirements

We will require a first round of investment of $500,000 for the development of MusicShaper.

- $50,000 marketing
- $100,000 legal
- $100,000 salary
- $50,000 development tools
- $50,000 overhead
- $100,000 software development
- $50,000 misc

MARKETING STRATEGIES

Market

The prosumer music software market may be compared to the market place for the Digital Audio Workstation (D.A.W.). However, most competitors are private companies, and protect their financial information so that total market size is difficult to estimate. Information that is available includes market capitalization for Avid corp. Avid owns Digidesign, M-Audio, Sibelius, Pinnacle, and Sundance Digital. The yearly market capitalization of Avid is $500M per year. Additional, Native Instruments, a company focused on the production of music plugins, is able to employ 180 people, indicating a yearly burn rate on staff alone, of $18 million dollars/year.

An alternative method to understanding the marketplace to Pentagram Music is to examine the online music offerings or band hosting and services. For example, Bandcamp has a userbase of 490 artists/page by 148 pages, which equals approximately 72,500 bands. On their website, Bandcamp claims that in the last month, their artists sold $500K worth of music. Taking a 10-15% cut of Sales, this site generates $150K to $225K a quarter, assuming consistent sales.

SoundCloud claimed 1 million subscribers in May 2010. Sales run on a tiered turnkey model, based on the amount of hosting needed. However, the firm offers a free basic tier, which is presumably what most of their subscribers use. MySpace claims it hosts 8 million artists' sites, many of which offer direct downloads of their music using SNOCAP.

Online radio stations have larger user bases. Last.fm has 40 million users. These are listeners, and not necessarily artists. However, this may indicate a good potential market for Pentagram
Music—last.fm users care more about music than the average user. Similarly as of March 2010, Pandora had 700,000 tracks in its library and 48 million users who listened for 11.6 hours per month on average. Grooveshark streams 50 to 60 million songs per month, to more than 17,000,000 users. As of April 2009, its audience was growing at a rate of 2-3% per day.

iPad sales are expected to exceed 10 million users by year-end. 91% of the owners of iPads bought software from the app store, and 45% of these users bought an iPad application. A 1% penetration of the iPad market would generate $1.5-3M growing with the marketplace for MusicShaper, the first Pentagram Music product. Success for this product could be translated to additional sales for other Pentagram Music products, generating a projected market capitalization of $20M per year.

**Market Position**

Competitor positioning is a key weakness for Musical DNA. Other contributors to the conceptual domain have failed to deliver compelling products at all. Musical DNA has entered the marketplace, with a live action instrument. Their concept lacks a compelling technique to program rhythms, and does not provide any midi output which could be used to drive more attractive musical sound devices.

In comparison, Pentagram Music has an edgy marketing narrative, a software platform that enables programming harmony and rhythm, and provides shortcuts explaining music theory that enhance the productivity of the individual user.

The prosumer client needs a system that helps them write music. Musical DNA requires the prosumer to understand how to deliver correctly formatted music on their own. Pentagram Music helps the user by doing the work for them.

**Pricing Strategy**

Pentagram Music will seek out high end position through higher prices for its software product line. The product strategy will combine cost plus and demand pricing. The software must be priced high enough to cover development costs, but must also respond to customer demand. Pentagram Music shall engage upon experimentation in small market segments in order to seek out resistance to pricing. Appropriate prices will be found when approximately 20% of the target market expresses resistance to price in focus group studies.

**Distribution**

The Pentagram Music platform will be distributed initially through placement in the Apple App Store. Follow up releases will add the Droid Marketplace. Direct sales will be made available through shopping cart functionality added to the PentagramMusic.com website. In addition, Pentagram Music may seek OEM bundling with certain partner firms. As market share of Pentagram Music products, the firm will also pursue retail placement of the software line.

**Promotions Plan**
Fortyseven Communications will be responsible for the promotions plan for the Pentagram Music platform. Fortyseven Communications has implemented a number of highly successful software marketing campaigns and events, such as the Game Developers Conference. Pentagram Music plans to leverage Fortyseven Communications proven channels for public relations and media interaction. Pentagram Music will place advertising through Fortyseven communications partner companies with bylines such as “Cast Musical Spells” or “The Magic of Music at your fingertips.” Pentagram Music may also drive entry into specific market segments by offering discount codes for software purchases.

**Personal Sales**

As Pentagram Music grows the company may be segmented into groups that specialize in the management of specific product lines. Each of these groups will have its own marketing and sales leads, responsible for growing the sales for each product. These salespeople will operate on commission, and implement specialized strategies for each offering.

**Sales Potential**

A 1% penetration of the iPad market would generate $1.5-3M growing with the marketplace for MusicShaper, the first Pentagram Music product. Success for this product could be translated to additional sales for other Pentagram Music products, generating a projected market capitalization of $20M per year.

**COMPETITIVE ANALYSIS**

**Competitors**

The main competitor in the marketplace is a small, new company called Musical DNA. Musical DNA have identified aspects of the geometry relating to musical intervals—the circular representation of the notes in the octave, and the description of the interval as a line between the notes, across the circle. They have also identified the existence of a tone spiral, as did Euler, in the 1600’s. There are a number of other experimenters and lone actors that have published elements of the theory in academic papers, on websites such as harmonisphere.com and spectratune.org.

**Strengths**

Musical DNA has two key strengths. One, they are the first into the multitouch market place, so they have prime mover advantage. Second, they have made a significant investment into a series of patents, 1 for the harmony representation, and another for a representation of rhythm. From these two patents, they have created a series of other patents for smaller claims that are derived from the first two.

**Weaknesses**
Because of the presence of a variety of online subject matter experts in the area, pre-existing patents from other individuals, and a “poor man’s patent” owned by CodeSource software in the area of musical geometry, Musical DNA’s patents are most likely indefensible, as they have attempted to patent elements that are common knowledge. The basic strengths of their legal position have been evaluated as poor by Alexandre Francois, professor of computer science and member of the Mathematical and Computation Music Society. The general opinion expressed was that the legal firm that prepared the patents had perhaps done a disservice to their client by filing indefensible material that is common knowledge to subject matter experts.

In addition, Musical DNA has not been well received in the community. Their Facebook, MySpace and Twitter pages indicate a general inactivity after their product was introduced, with mixed feedback. Reviews of their product indicate that it is buggy, locking up the sound on the iPhone, and hard to use. Essentially their offering is a live instrument that allows the user to play notes in a circle, winding up or down the music spiral. This prevents the user from playing certain sequences of notes, and requires them to understand both key and chord structure on their own. The users must understand the geometric interpretation on their own before using the tool, and must have dexterity in order to ‘play’ the application. Finally, the audio support of the application has the sound of an entry-level keyboard using general midi sounds. This lacks the appeal required to attract the prosumer buyer.

Finally, Musical DNA has marketing that collides with the Pandora project concept of Music DNA. This confuses the prospective consumer and obfuscates the sales effort. Musical DNA appears to have focused their efforts primarily on legal positioning and not on marketing strategy. This leaves a broad opportunity for a competitor to enter the marketplace with second mover advantage: the second mover observes the mistakes of the prime mover, and adjusts their strategy to gain a dominant market position.

**Opportunities**

Musical DNA has reported an effort to license their technology. It may be possible to defer any legal battle through negotiations.

**Threats**

Should musical DNA be successful in selling their patents to a “Patent Troll” with a significant legal group, their negotiating position may be strengthened significantly, and they may have the ability to capture a larger percentage of the market through legal maneuvers.

**COMPETITIVE STRATEGY**

**Product**

In order to avoid the pitfalls of Musical DNA, Pentagram Music will focus on marketing, and user experience. The prosumer target market has been carefully analyzed, and the productization of music shaper and follow on products are designed to engage the prosumer in ways Musical DNA does not. Pentagram Music shall create a line of user interfaces, evaluated by musician,
mechanical engineer, graphic designer, and software interface expert. These interfaces shall be
designed to encode a process for songwriting that will allow the prosumer to create music easily
and intuitively. The interface will support rhythm programming, a component overlooked by
Musical DNA as a simply linear operation.

**Distribution**

Pentagram Music will place products prominently in the Apple App Store and Android
marketplace. Additional software may be distributed through an online store associated with the
company website. Additional sales may come through OEM bundling of software with other
manufacturers.

**Pricing**

Pentagram Music products will establish a high-end market position by setting prices high for
each of their products. The user will perceive the applications to be high quality and high
capability because their value is expressed in the cost of the application.

**Promotion**

The communications strategy for Pentagram Music leverages the mystic image of the pentagram.
This takes advantage of the prominent placement of pentagrams in the musical geometry of the
tool. This approach is edgy and should appeal to risk takers, rock and roll fans, and the youth
market place. The slogan “Cast Musical Spells” succinctly describes the product benefit and
forms a theme around which product communications may be focused.

**Advertising**

Pentagram Music shall utilize an advertising campaign using partner firms of Fortyseven
communications. Fortyseven communications has a solid track record for new media and art
technology promotions, and can reuse their established channels for product announcement and
promotions.

**DESIGN AND DEVELOPMENT PLAN**

**Product Development**

Pentagram Music shall productize an excellent user experience. The first product, MusicShaper,
will establish a market position that demonstrates this excellent user experience. If the company
is successful in this endeavor, a second, higher end product—MusicArchitect—shall be
launched. Music Architect shall provides professional support for composers. Follow on
applications shall provide support for sound engineering, orchestrated performance, song
writing, video and lighting system interface. Each of these platforms shall integrate with an
online system for user collaboration and content sharing. Pentagram Music operations must be
scaled up to address the growing scope of the software line.
**Market Development**

Pentagram Music is partnering with Fortyseven communications, in order to build a reputation for excellence and innovation in the prosumer marketplace. The initial product launch must establish the company as experts, in the mind of the user. Using a combination of mystic themes in the marketing campaign, and distribution of software that provides an excellent user experience, Pentagram Music seeks out a niche as the leaders in geometric music composition on multitouch platforms, with online collaboration and content sharing. With a sufficiently ‘killer’ application, demand for Pentagram Music products can help drive adoption of desktop multitouch applications, and adoption of desktop multitouch applications can drive adoption of Pentagram Music software products.

**Organizational Development**

Pentagram Music will initial be a skeleton operation relying on outsourced software development, outsourced marketing strategy, and a variety of outsourced supporting services. As the operation grows, Pentagram Music must be partitioned into support units for each software application. As the company reacts to the marketplace demands, organizational strategies may change. The company must remain focused on innovation and agile response to the needs to its customers. This must be facilitated by a set of corporate policies that encourage a culture which supports innovation.

**Goals**

The Pentagram Music Quest is the democratization of music theory. The company will establish itself as a leader in the niche of geometric music composition.

**Procedures**

Each product in the Pentagram Music Platform shall undergo extensive analysis and design. Each product shall be intended to offer labor saving innovations, visualization techniques that simplify complexities in the application domain, and touch interfaces that streamline and enhance user productivity. In order to support these benefits, the company will engage in agile development, rapid prototyping, graphical and industrial design, and product development in concert with market experts. The company shall engage in iterative development in order to maximize the quality of its offering.

**Scheduling**

MusicShaper shall be released 6 months after series A funding. Series A funding shall cover marketing and development costs for MusicShaper, and part of the development costs for MusicArchitect. Income from MusicShaper and Series B funding shall pay for development and marketing of MusicArchitect and some part of the development costs for the Pentagram Music platform. MusicArchitect shall be released the year after MusicShaper. Additional components shall be released based on scheduling that is reactive to customer needs and market reaction.
**Budget**

Pentagram Music budget will consist of the following:

- $50,000 marketing campaign for MusicShaper
- $500,000 marketing campaign for MusicArchitect and Pentagram Music Platform
- $100,000 legal budget, intellectual property filings and strategy, defense.
- $100,000 salary for all staff for first year, to expand as company income is demonstrated
- $50,000 development tools—software licenses, product libraries, hardware
- $50,000 overhead, office space, administration, utilities, etc.
- $100,000 software development per year, to outsourcing provider.
- $50,000 misc supplies, insurance, etc.

**Personnel Strategy**

Pentagram Music shall initially leverage outsourced software development and outsourced marketing. Staff shall be recruited from Harvey Mudd College, and the operations of the company shall remain skeletal, virtual, efficient, and lean. An interim CFO shall be utilized, who has previous experience working with CodeSource Software. Manpower requirements shall be gauged against the demands of the customer base, and the company shall react as needed.

**Development Risks**

Modes of failure for Pentagram Music include the following scenarios:

- Low production quality results in a buggy product that fails consistently and turns off the user base.
- Failure to understand the musical geometry effectively ruins the user experience and results in a substandard product.
- A patent troll picks up the musical DNA patent and engages in a legal war of attrition, due to substandard legal protection for Pentagram Music.
- An experience and creative competitor partners with Musical DNA and works to provide a competitive and compelling offering in the marketplace, reducing market share for MusicShaper and the Pentagram Music Platform. No signs indicate this is imminent. However, it is possible.
- Insufficient funds are acquired to launch a marketing campaign for MusicShaper, MusicArchitect, or the Pentagram Music Platform.
- Product complexity exceeds the production capabilities of the software organization.
- Market analysis misreads consumer trends.

**OPERATIONS AND MANAGEMENT PLANS**

**Organizational Structure**

Marketing and Sales will be handled by Fortyseven communications. The student code developers and professionals from CodeSource will handle production and quality of the product during the spring semester of Harvey Mudd College. Research and development will be handled
solely by the student code developers. The CEO Mark Strachan, interim CFO David Nimitz, and board member Sibel Sunar will handle administration.

**Operational Expenses**

The operational expenses for our product will include $50,000 for advertising and promotions from our first round investment and $500,000 for advertising and promotions from our second round investments. Supplies will total $50,000 and payroll will be $100,000 with a $50,000 overhead for the development of MusicShaper. Professional services that need to be paid include lawyers, working with CodeSource, partnering with Fortyseven Communications, and insurance fees (~$6,000).

**Capital Requirements and Cost of Goods Sold**

The required funding from first round investment is $500,000 and the required funding from second round investment is $4,000,000. The cost of goods sold will be minimal and unrelated to number of units sold.

**FINANCIAL COMPONENTS**

Spreadsheets included as separate documents submitted in email.