

D6.4.2 Final Exploitation Plan

Abstract

This deliverable presents an update to the original Marketwatch report (D6.3.1) and the SIMAC partners' stated exploitation strategies.

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Editor: David Wallace (MD)

Contributors: Salvador Gurrera (FUPF), Xavier Serra (FUPF), Fabio Vignoli (Philips), Gerhard Widmer (OFAI), Mark Sandler (QMUL)

PART A – Marketwatch

1.	SUMMARY	3
2.	INTRODUCTION	4
3.	OVERVIEW	5
4.	CONTENT OWNERS	6
5.	DOWNLOAD SERVICES	8
6.	P2P FILE SHARING	19
7.	RIGHTS SERVICES AND TRACKING	22
8.	RECOMMENDERS AND DISCOVERY	24

PART B – Partner Plans

1.	INTRODUCTION	27
2.	SUMMARY	28
3.	TECHNOLOGY DIFFERENTIATORS	29
4.	PHILIPS	32
5.	FUPF	36
6.	OFAI	38
7.	QMUL	40
8.	MATRIX DATA	41

1. SUMMARY

This report comprises two parts.

Part A considers the development of the broad digital music business macroeconomy, updating the considerable changes in its nature and activity in the 15 months since the original SIMAC MarketWatch report was written. It is hoped that this will give a context for Part B and help SIMAC position its technology.

Part B is each SIMAC partner's stated exploitation plan.

It is clear that SIMAC technology has the potential to add value in many if not most of the areas identified. Music collections are growing rapidly and the digital music industry is gearing itself up for the advent of discovery and recommendation engines such as those provided by SIMAC's Navigator and Recommender. To support these consumer-facing applications, music collections will need to be extensively tagged with tools such as SIMAC's Annotator. A number of early entrants have appeared in the marketplace.

One rapidly-growing area is mobile music OTA (over the air). The smallness of screen size on mobile handsets raises issues which may require novel architectures to fully support discovery technology.

PART A

2. INTRODUCTION

The digital music marketplace has been largely transformed in the 15 months since writing of the SIMAC Marketwatch Report (D6.3.1). A plethora of new organizations and services have appeared.

So fast has been the development of the digital music market that it is impossible to cover all developments comprehensively. This marketplace is highly turbulent and changing very rapidly. It is therefore difficult to place SIMAC technology exploitation opportunities accurately within it.

3. OVERVIEW

Certain trends are clear in the music macro-environment.

- There has been a rapid growth in the number of music tracks available on-line – now running into the tens of millions of tracks.
- The size of consumers' personal music collections continues to grow rapidly.
- Sales of physical media are declining year-on-year while downloading is increasing.
- The growth of personal music players has been dramatic, and player prices are now set to drop dramatically.
- There is currently enormous interest and investment in the delivery of music via mobiles (OTA – “over the air”).
- Some are predicting a new wave of investment in music recommendation and search engines.
- The structure of the music industry is changing dramatically with the emergence and growth of many new commercial players offering new products and services and challenges for existing players with their older products and services

4. CONTENT OWNERS

Traditionally, content owners have been the record labels, defined as the 4/5 major record labels comprising approximately 75% of the market and a vast array of independent labels forming the rest.

It is clear that digital download has allowed the entrance of new products, services, aggregators, distributors and intermediaries fundamentally altering the music value chain.

Revenues at the major record labels are on a downward trend while the independent labels appear to be flourishing. Various explanations are given for the decline in revenues of the major record labels.

- Physical media sales are declining.

According to a report by Forrester Research, sales of physical formats in Europe will decline 30 percent over the next five years. In the United States, Soundscan revealed a 7.2 percent drop in album sales in 2005, while other estimates peg the dip closer to 10 percent. Meanwhile, global label body IFPI pointed to a 2 percent drop, part of a multi-year slide. And in the first quarter of this year, the decline has hit 5.5 percent, which actually represents a slowed decrease. Talk of a CD sales recovery is now mostly being abandoned.

April 06 research from Forrester Research focusing on the European market projects a healthy replacement from digital formats. According to the report, physical formats will decline 30 percent over the next five years, though digital revenues will multiply tenfold, moving to €3.9 billion (\$4.7 billion) a year. That will raise overall music revenues from €9.5 billion currently to €11 billion, meaning the bottom is right now.

A particular concern is that album sales could suddenly drop dramatically, a development that would have large repercussions for major labels being replaced by song downloads.

- For the major music labels the decline in physical media sales is not currently being replaced by digital sales

(this is considered below ... Part A section 5)

- Illegal file-sharing

(this is considered below ... Part A section 6)

- Other reasons

According to one analyst's warning, the majors need to re-connect with customers to breathe life into physical and digital retail sales. The report, released by Mintel International Group Ltd., observes that it isn't just file-sharing that's killing music sales, but the actions of the industry itself. "The growing distance between the music industry and its consumer is due to a number of factors," said Mintel analyst Justin De Santis. "These include lawsuits against individual consumers, payola practices, and, most recently, restrictive digital rights management," he warned. The analyst group predicts that US-based music retail sales will shrink to \$10.5 billion by 2010, from \$12.5 billion in 2005. While legitimate digital music outlets such as the iTunes Music Store have helped to slow overall sales declines, the analysts note that a broad sector of music consumers are not being satisfied. "While illegal downloading has

hurt the industry, big labels have relied on obsolete strategies for over a decade, and have been late in exploiting emerging technologies," the research firm asserts.

However, thanks to its equalized access to promotional and sales outlets in the digital world, the independent sector is gathering force. "The bond between independent artists and their fans has become stronger," Mintel observes. "The current renaissance of underground media has further driven the consumer away from major labels," De Santis opined.

5. DOWNLOAD SERVICES

Digital download services and products are springing up and growing in many new channels.

Traditional PC download is being supplemented with mobile products and services, digital radio and a digital kiosk market is also appearing.

5.1 Download to PC

5.1.1 Introduction

Since the MarketWatch report the music download market has once again grown dramatically. It is impossible to track new services which are appearing on nearly a daily basis but business models still revolve around either subscription or paid-for download.

However, even after several years, paid download and subscription services still remain a question mark revenue-wise. Most paid download stores are suffering, and even the iTunes Music Store is a mere servant to the iPod hardware in terms of overall earnings.

5.1.2 Market Metrics

In April 06 Gnarlz Barkley made history and highlighted an important inflexion point in the importance of digital download to PC as the first digital-only single to top the UK singles chart, holding onto the top spot for a second week in a row.

Earlier this year Apple hit one billion paid downloads (after 3 years). The trend on Apple iPods is assuming staggering proportions, with 14 million - or 35 percent - of all units being shifted in 05's fourth quarter of alone. Although the player first hit the scene several years ago every consumer now considers iPods are cool, and the snowball is creating one record quarter after another for Apple.

In an April 06 report Forrester Research has estimated that the current digital market is just 2 percent of overall music industry earnings in Europe, offering the potential for massive growth ahead. Specifically, Forrester analyst Rebecca Jennings pointed to a 36 percent piece of the pie by 2011, though certain steps must be taken to reach that mark. According to Jennings, rights holders must be "prepared to meet consumer demands for flexible, easy-to-use services with competitive pricing models," a big "if" for the industry moving forward. Meanwhile, a continued reliance on DRM protections by digital music stores and labels continues to draw criticism, and has prompted French lawmakers to push an interoperability initiative. Whether the bill passes remains to be seen, though complicated usage restrictions have been widely blamed for a relatively cool reception of paid formats online.

Jupiter Research predicts a consolidation of the digital music market.

Although paid digital music formats continue to build up steam, larger questions remain over the long-term health of a number of players. JupiterResearch examined the European market, and pointed to a massive consolidation ahead. Factors like expensive rights clearance costs, narrow digital margins, and intense competitive pressure will lead to a significant shake-out ahead, according to the group. The market research firm projected that digital formats will account for about 16 percent of overall music revenues by 2011, a rather modest projection. JupiterResearch pegged the current digital market at €192 million (\$231.7 million), just 2.2 percent of overall, European music revenues.

In the United States, a handful of digital music stores are competing for consumer dollars, with iTunes dominating. The terrain in Europe is a bit different, featuring about two-hundred different stores. But Apple is also quite dominant in the region, reducing revenue opportunities considerably for remaining players. Meanwhile, the JupiterResearch report is somewhat bearish when it comes to overall digital growth, and notes that the CD will continue to account for a large percentage of music purchases by 2011.

Analysis by PayPal Europe projects that paid downloads will grow ten-fold by 2010 in the UK, accounting for about 15 percent of the overall market. Revenues will reach £379 million, or

\$656.7 million, over the four-year period, according to the study. PayPal also estimates that the average British consumer will download 25 tracks and spend £15 (\$42.1) on music downloads by 2010.

5.1.3 Subscription vs Paid Download

The market continues to be split between subscription services (Napster, Rhapsody) and a la carte paid downloads (iTunes). A number of such key services are reviewed below.

Richard Conlon, a vice president at BMI, points to subscriptions as "an intuitive next step" in the evolution of music delivery, offering recurring payments, increased revenues, and more reliable financial forecasting. Top executives continue to offer bullish projections on the space, pointing to unparalleled convenience, excellent selection, and newfound portability. Online and satellite radio subscription services are in a developmental phase, and mobile-based subscription plans are an integral part of just-released, OTA music download services

Collectively, various services like Rhapsody, Napster, and AOL Music Now claim two million subscribers. But more widespread adoption has been limited and it is thought that the massive availability of free files on various P2P networks could be one culprit, though the story is probably more complicated than that since file-sharing was driven by intense user interest, and once the dust cloud on Napster I had cleared, music fans had an irreversible taste of the cherry-picked download, available anytime.

However, some executives like Steve Jobs reject subscription-based thinking entirely, pointing to an inherent consumer desire to own music. That has been validated to some degree by the iTunes Music Store, which has now produced one billion paid downloads after about three years. And this may be what consumers ultimately want - loose tracks, assembled in big hard-drives and iPod collections.

During a recent focus group in America of older teenagers, the responses seemed to always go back to LimeWire and iTunes. And interestingly, the subscription service names "Rhapsody" and "Napster" were completely unknown to the respondents. Actually, Napster did have name recognition from its first incarnation, but the current version was unrecognized. Part of that may due to demographics – young adults are generally cash-poor, and \$10 a month actually takes a toll.

But moving forward, the a-la-carte vs. subscription argument is becoming increasingly shaded by grey areas.

Melodeo CEO Bill Valenti has pointed to a future role for advertising, particularly in the podcasting realm. "Podcasting already has advertising in it," Valenti said, pointing to sponsorships and advertisements within about 80 percent of top podcasts from services like iTunes. Pushing the concept further, Valenti pointed to a mobile music download model that incorporates advertising, replacing or lowering heavy per-track, OTA charges. In both cases, subscription and download costs are minimized or eliminated for the consumer. But for most mobile music executives, that thinking remains premature, especially with the possibility of extreme revenues emerging from a straightforward OTA payment model.

Apple is also experimenting with going beyond its a la carte download model, introducing several new bundling experiments. In March 06, the iTunes Music Store offered the option to pre-purchase downloads of two Comedy Central shows, namely "The Daily Show" and "The Colbert Report". Once a show is released, buyers can simply drop it into their iPods, without having to re-order every time. And fans are expected to appreciate the discounted purchase price, part of a time-worn sales strategy designed to increase overall buying.

Other experiments are also in play at iTunes. The digital album itself has always been a discounted purchase, though the format has mostly struggled. To prime the pump a bit, Apple has delivered its iTunes Original series, which offers a heavy collection of in-studio exclusives and interviews for a deep discount. For example, a Fiona Apple set contains 27

tracks for \$9.99, while a Jack Johnson set contains 25 tracks for \$11.99. Meanwhile, Apple has recently delivered a packaged play involving music videos and track downloads for Tori Amos, a total of one song and 21 videos for \$24.99. The set, called Fade to Red, was released earlier this month. And more bundles are likely on the way, especially if certain configurations begin to resonate with consumers.

iTunes

Apple iTunes is clearly the global market leader in digital download. But threats to this dominance are potentially on the horizon with the emergence of extremely cheap music players (\$8-9) threatening its iPod hardware sales-driven music business model, as well as the development of mobile music services where the mobile handset becomes the player.

New research from M:Metrics suggests that the key target market for mobile music assets could in fact be the iPod demographic. The company reported that iPod owners are twice as likely to use music and video applications on their phones as average mobile subscribers. And, iPod users are also more willing to pay, based on previous experience with the iTunes Music Store. According to M:Metrics, iPod owners account for 14.4 percent of all cell phone users, but they represent nearly 30 percent of those who listen to music and watch videos on their mobile devices.

The iPod buyer is a very music-focused demographic. But whether the iPod generation will drive an over-the-air (OTA), mobile download boom is far from certain. iPods themselves often contain just a handful of paid tracks, despite a capacity of several thousand. And the tech-savvy iPodder is nearly three times more likely than the average mobile subscriber to transfer, or side-load, existing music from their computer to their mobile phone, M:Metrics explains. Meanwhile, many iPod users will be content with the solution they already have, which neatly organizes and plays massive collections.

Moving forward, the report notes that iPods and mobile music services could coexist, just as camera-ready phones blend with stand-alone digital cameras. "There is clearly demand for converged mobile devices among those who lead a digital lifestyle to enhance, not necessarily replace, their existing digital media devices," said Mark Donovan, vice president and senior analyst. "Nokia has become the world's largest manufacturer of digital cameras, but camera phones haven't destroyed the demand for dedicated digital cameras. In a similar fashion, mobile music and video capabilities will become ubiquitous, but are unlikely to 'kill the iPod'."

The iTunes Music Store has recently intensified its commitment to classical music, with several exclusive performances from both the New York Philharmonic and Los Angeles Philharmonic. As the digital download market expands, classical music is emerging as an interesting winner. While classical accounts for less than 4 percent of traditional CD sales, it powers about 12 percent of tracks sold on the iTunes Music Store. This surprising statistic may demonstrate the ability of digital distribution to expand niche markets. In a recent discussion with the Guardian Unlimited, Universal vice president Jonathan Gruber pointed to the online success of violinist Janine Jansen as an example of the new trend. A recent Jansen recording of The Four Seasons by Vivaldi received seventy-five percent of its revenue through downloads, a strikingly high figure.

The answer to what is driving the strength of classical online is unclear, though the development may reflect the more exploratory nature of those who purchase digital downloads. Others have pointed to the BBC's recent release of all nine Beethoven symphonies for free last summer, a freebie that may have stimulated consumer interest in the genre. The reaction to that effort far exceeded expectations, as music fans grabbed 1.4 million downloads in two weeks. Convinced there is a burgeoning market, Warner Music Group is ready to announce its own classical download site, which could eventually include a catalog of over 25,000 classical titles. Meanwhile, British indie label Chandos has already seen success online. "When we started our download site last June we had about three CD

orders to every download," Chandos managing director Ralph Couzens told the Guardian. "Now it's the other way round."

For labels, which have suffered from a major shift towards digital singles, this is a genre that will probably continue to favour the album. Already, classical appears to be faring well in the digital realm, and the typical classical buyer is far more likely to make a legitimate purchase.

But the classical genre ushers in some challenges that will probably merit some updates from Apple. First, a complication emerges between the "composer" and "artist" field, something that has confounded several other stores and streaming audio providers. This development may have interesting effects for SIMAC partner Matrix Data whose software The Media Matrix manages this complication effectively.

On the iTunes application and the iPod, the issue rears its head again. Searching for an "artist" of "Mozart" on an iPod failed to identify a recently-downloaded and synched collection of symphonies by the great composer, and even a search within the "composers" field failed to find the correct result. Searching for conductor "Lorin Maazel" finally did the trick.

As the classical music lover migrates online, companies like Apple may push improvements in the area. Good sound quality and the increased availability of recordings are big wins, but the composer/artist issue bucks the organizational architecture of both the iTunes application and the iPod, creating some tough challenges ahead.

Other issues were noticeable, but perhaps less important. For example, a digital booklet came with the purchase of Mozart's "Last Symphonies," though a PDF download was required to view the result. The notes are certainly viewable, and nothing breaks, though viewing the notes within the iTunes application might be preferable. Interestingly, a large number of movements cannot be obtained as individual downloads - they must be purchased within the larger work. That challenges the prevailing iTunes Music Store sales philosophy, though the tradition of classical music would probably resist drawing a comparison between the movement and a 99-cent single.

Napster

Napster and its subscription model are still struggling commercially. The subscription market continues to notch upward and the revenue picture remains strong for Napster. In its fiscal fourth quarter earnings call the company outlined revenues of \$26 million, and pointed to a "narrower net loss than originally projected". The company points to doubled earnings during its most recent fiscal year, and a subscriber total of 600,000.

Although the latest developments are positive, the long-term forecast still remains hazy for Napster. A subscriber total of 600,000 represents some growth, though quarterly losses recently topped (\$17.0) million during the fiscal third quarter, itself a mounting deficit over losses of (\$13.6) million incurred during the previous period. That puts subscriber increases in perspective, as per-user acquisition costs remain high.

MTV? Amazon? Google?

Interest in music is immense and growing with its power to attract consumers to online sites and experts predict that other big players, currently on the sidelines, may attempt to make a confident entrance into the market.

MTV's Urge is now scheduled to emerge in the next few months with a WMA-based, iPod-incompatible service. The MTV brand is widely recognized, but similar mindshare heavyweights - including Napster, Wal-Mart, and Yahoo - have had difficulty creating consumer traction. The business reality is that selling music outside of the iPod+iTunes ecosystem is very difficult. That may explain some of the hesitance exhibited by MTV, which

has been pointing to its upcoming service since late 2004. Urge is likely to contain a host of other features unrelated to a-la-carte downloads, including video programming and mobile content - all part of a multi-platform, diversified strategy. But in terms of straight digital music retail, industry experts predict that Urge will be an uphill battle.

There are rumours that online retailing giant Amazon plans to open a digital music store later in 06, with "beating" iPod+iTunes at its own game is part of the strategizing. Meetings with major label are said to have included discussions about a cut-rate Amazon-branded MP3 player (to challenge the iPod), and instant digital downloads to correspond with physical CD purchases. It is thought that labels may finally be in a mood to entertain far-reaching Amazon features, part of an attempt to equalize the online digital music marketplace and reduce Apple's power. But they may wait a few quarters to see if the rise of mobile music hardware and services (see below) will continue, something that could compromise online sales models.

Google is also now said to be "networking" with top music executives although it has said that it currently has no plans at this time to develop a music store." Google currently offers artist-specific results pages, which aggregate various links to content like photos, discography listings, and paid downloads.

Sony and Microsoft

Sony plans to develop an online content service around its upcoming PlayStation 3 gaming console include digital music downloads. The plan focuses on the PlayStation Network Platform, which will offer PlayStation 3 (PS3) users easy access to downloadable music, movies and games. The rollout will part of a growing PS3 ecosystem. Sony Computer Entertainment Worldwide Studios president Phil Harrison characterized his industry as moving away from products in favour of services, such as new episodes for existing games, as well as music, movie and TV downloads. The service will debut when Sony's console launches in November 06.

As part of a similar strategy, Microsoft recently tied up with Epic Records, a division of Sony BMG, to offer its users artist previews and videos. In this case, the console is Microsoft's Xbox 360, and the related content platform is Xbox Live. As part of the deal, Epic will supply Xbox Live with a slate of emerging artists, including a portfolio of exclusive assets. British singer-songwriter Natasha Bettingfield will be the first of twelve showcased artists, each of which will be presented monthly over the course of a year.

MSN continues to push into the social networking space, and music is a major component of the strategy. "With your own space, you can share your thoughts, photos, and music lists," MSN pitches on its "Spaces" launch page, spaces.msn.com. Like market leader MySpace, a major aspect of the development plan involves up-and-coming bands. Most recently, MSN has been pitching the destination to aspiring groups. "If you are an independent artist, if you are an independent label, we have a global platform to promote you," a flyer distributed at a recent music event promised.

Elsewhere in the Microsoft empire MSN Spaces is using digital music as a driver. MSN Spaces, which reports a unique monthly user base of 123 million worldwide (part of a larger MSN population of 460 million) will offer unsigned and developing artists a platform to promote their music, and another place to develop a groundswell online. MSN is preparing to launch Windows Live Spaces this summer, which promises to be the "future of MSN Spaces".

MySpace and Social Networking

As the social networking space experiences a flood of new entrants, music continues to be a driver.

Leading social networker MySpace is continuing to expand its music initiatives, which includes an ongoing string of promotions involving major artists like Pearl Jam and Yeah Yeah Yeahs. Savvy bands are beginning to develop success stories on the site, mainly by developing organic communities online, while complementing their digital profiles with live appearances.

Los Angeles-based Buzznet, a community site that rallies individuals based on collective interests and multimedia assets, is a new entrant. Here, a user can upload a photo onto Buzznet with an appropriate tag referring to a band, which in turn instantly populates a page dedicated to the group. The result is an ad-hoc community of fans, joined by a common interest. "Music is a natural fit for us," said company co-founder and CEO Anthony Batt. "There is already community around it." To that end, the company is brokering a raft of new music relationships. Chief among them is a deal with event promoter Goldenvoice to create an interactive destination for musical festivals. Attendees will be encouraged to upload photos, either from a mobile phone or camera, to the dedicated Buzznet page. Marc Brown, co-founder and president, pointed to additional deals involving Rob Thomas and Matisyahu. In the case of Matisyahu, the artist is combining his snapshots from various performances with those taken by fans, creating a "total mash-up" according to Batt. And that closeness is something that users respond to. "Our users don't want an intern at the label uploading the photos," Batt noted.

eMusic

Independent music retailer eMusic offers an interesting middle ground between the one-off, a-la-carte strategy of stores like iTunes and subscription services like Rhapsody from RealNetworks. The company which now carries content from 4,000 independent labels, and has recently reached a subscriber total of 150,000 has a unique download sales strategy, in which subscribers pre-purchase bundles of monthly downloads. Sales at eMusic have accelerated in Jan and Feb 06 with a sales total of 9 million during the months of January and February, and 54 million tracks over the past two years. While market leader iTunes recently crossed the one billion mark, eMusic does carry the second-place slot in the paid download space. "eMusic's growth rate continues to accelerate, and independent labels choose to work with us because they understand that we effectively target and market to their audience," said David Pakman, eMusic president and CEO. Meanwhile, eMusic sells all of its tracks in the MP3 format, which guarantees compatibility with all digital music players, including the iPod.

Fisher Price's FP3Player

An interesting new segment that is set to appear in the market in summer 06 is for young children. Toddler toymaker Fisher-Price, a subsidiary of Mattel, Inc., will soon deliver a new MP3 player and download service, effectively a junior version of iPod+iTunes. Dubbed the Kid-Tough FP3Player, the device will come pre-loaded with six songs and two spoken word stories, though other product details remain scant.

The release could spark interest among the targeted toddler demographic, which is not yet ready for a more adult, iPod solution. But the iPod+iTunes pairing is being translated by Fisher-Price for its core audience, and reflects an awareness among manufacturers that portable MP3 players require a strong software companion. Parents may appreciate the controlled environment, and Fisher-Price is playing to its crowd well by offering children's music and spoken word content. But experts question whether a market exist for the under-seven sect.

"Content into Cash" Services

In addition to the "wholesale" sites reviewed above, a whole host of "content into cash" services like Entriq's MediaSphere and Musicane have emerged.

Musicane's service enables artists, labels and content aggregators to sell downloads directly from their websites. Musicane's do-it-yourself approach will allow Musicane clients to post original content within minutes after its been recorded and is billed as a "digital solution that will help monetize the artists' web traffic" particularly around music festival dates. It manages a constellation of services ranging from downloads of music, video, ringtones, images, and coupons to sales reporting.

Entriq's digital music clients include MTV, NPG Music Club (Prince's interactive lifestyle and music Web site), Wind Up Records and VH1.com.

5.2 MOBILE DOWNLOAD

5.2.1 Ringtones

The ringtone has quickly evolved from novelty to cash cow, and its influence is now spreading in different ways. Executives are watching early ringtone adoption rates to better gauge hit singles, and artists - especially rappers - are pushing the format aggressively. The music industry is now treating early ringtone sales as an indicator of overall artist and track success, not just an after effect.

Cingular Wireless is further raising the importance of the ringtone by making it easier for unsigned bands to embrace the format. The collaborative play, which involves MySpace and InfoSpace, will allow up-and-coming bands to easily create ringtones and distribute them to their fans.

According to a projection issued by performance rights organization BMI, overall ringtone sales will climb to \$600 million this year, a 20 percent increase over levels of \$500 million in 2005. The organization, which represents over 300,000 songwriters, composers and music publishers, reported that the market was worth \$245 million in 2004, and just \$68 million in 2003. According to BMI, those estimates are based on over 360 million individual, detailed ringtone transactions, analyzed by the organization over the past seven consecutive quarters. "We see the market maturing in 2006 with growth fuelled by an increase in multimedia handsets and more aggressive marketing by wireless carriers," said BMI vice president of Business Development, Richard Conlon. The projection also characterized 2006 as a "make or break" year for emerging ringback tones, which are currently in a "novelty phase" in the United States.

5.2.2 Track download - "OTA"

Many consider mobile OTA ("over the air") is the next digital music market to experience explosive growth.

In the USA, Cingular and T-Mobile are readying launches this year, joining front-runners Sprint and Verizon which has an OTA catalogue of one million. Whether an OTA boom is ahead is unknown at this point, but major players are positioning themselves ahead of a possible new market.

Verizon's strategy is a push to make it synonymous with music entertainment. Just recently, the company launched an unsigned band competition in conjunction with MySpace, and offered the winner a mobile-based promotional push on its network. Earlier, the company also offered exclusive access to an unreleased Fugees track, "Wannabe," which complemented a live concert on the streets of Hollywood. Also today, Verizon Wireless released lists of its top 10 downloaded songs across 25 different music genres. Songs cost \$1.99 if purchased over-the-air, or \$0.99 if purchased through a PC.

Paris-based Musiwave announced that its network of 22 mobile carriers have collectively sold one million OTA downloads. The figures follow news that Sprint has now crossed the 2 million mark, a feat that took just under six months. By comparison, Apple sold two million songs in just six weeks after launching its then Mac- and US-only iTunes Music Store in 2003, though Sprint customers must first purchase an OTA-compatible phone prior to initiating downloads. The Sprint Music Store currently offers 400,000 songs from all four major labels, and each track costs \$2.50.

The Musiwave announcement sheds light on the all-important European market, where the entertainment content provider is well-entrenched. In fact, Musiwave does not have a significant footprint in either the Asian or US markets, though it is attempting to push into those regions. "Today's milestone was achieved collectively by the more than 22 mobile

operators worldwide...with the exception of the United States and Asia-Pacific, which Musiwave is targeting in its expansion efforts," the company noted.

Meanwhile, ABI Research pointed to a massive global OTA expansion, with revenues moving to \$251 million last year, up from \$12.4 million in 2004. The Asian market accounts for a large percentage of those totals.

The story of UK mobile-based music downloads is just beginning, a market that PayPal predicts will hit £200 million (\$346 million) in the region by 2010. UK-based mobile operator 3 (Hutchison 3G UK) continues to reveal strong over-the-air (OTA) download data, most recently involving chart-topper Gnarls Barkley. According to 3, the company grabbed 20 percent of all downloads of the winning track "Crazy," further highlighting the possibilities of the OTA market. The news closely follows the announcement of one-million OTA downloads by 3. "These figures show that 3 is dominating mobile music," proclaimed Graeme Oxby, a marketing director at the company. "Every one of our 3.5 million customers has a music shop in their pocket, and their choices now have as much impact on the charts as a traditional music store."

However, services could be hampered by the handsets' exceptionally tiny screens. Broad computer monitors have allowed services like iTunes and Rhapsody to stretch their selections, and showcase deeper catalogue.

"People are only going to drill a couple screens deep," commented top EMI digital executive Ted Cohen. Cohen praised up-and-coming companies like Melodeo and Groove Mobile for pushing mobile discovery and search. Undoubtedly, given this limitation, it will be difficult to secure promotional placement for certain artists, especially in genres like rock, and gems are in danger of remaining buried beneath the surface.

Positioning plays a big role in resulting revenues. "Getting good position on a phone is critical," said Jonathan Kim, senior vice president of Products & Services at mobile backend provider WiderThan, Inc., which powers portions of the Verizon service. But Kim also pointed to an increase in music-focused mobile executives, and a "different mindset" at carriers. Despite the mindset other industry executives are remain concerned about architecture issues.

Evidence of the mobile opportunity comes from the fact that mobile users are seen to be more casual purchasers, with the iPod itself now attracting more and more casual listeners. One estimate now pegs the average device collection at several hundred. But another average is also worth watching, and that is the number of paid tracks on the average iPod. Assume 45 million iPods, and one billion iTunes Music Store downloads, and the rough average is 22 paid tracks per user. For Apple, that lowly per capita is not a concern, because the big ticket item is the iPod itself. But if that behaviour translates into the mobile realm, through side-loading, the issue takes on a new dimension.

"There is a tremendous opportunity to enhance [existing models] with OTA, but don't try to reverse the model," said Cingular vice president of Consumer Data Products Jim Ryan who recently pointed to a strategy that positions the OTA as part of a larger music download offering, leaning less on the format than other carriers. That philosophy corresponds with the structure of the iTunes phone, which is supported by Cingular and focuses on PC-based side-loading.

Indie labels continue to impact the digital music landscape, success spreading into mobile formats. Most recently, independent content distributor The Orchard revealed a new deal with InfoSpace, a mobile content aggregator. The partnership will position 800,000 master ringtones from independent artists to InfoSpace partners, which include Cingular, Virgin Mobile US and T-Mobile. The Orchard is the first major independent music distributor to offer tones to InfoSpace's network, which collectively offers a reach of over 85 million mobile subscribers. The Orchard will maintain direct marketing relationships with each carrier, giving the company the flexibility to create custom-tailored promotions for specific operators. The deal also promises a slate of mobile-only music releases.

Van Toffler, president of the MTV Networks Music/Films/Logo Group, has characterized the mobile phone as "the holy grail of electronic devices" among the young adult MTV demographic, while predicting that "it's just a matter of time before a cultural icon like Flava Flav emerges from wireless". During a CTIA Wireless keynote on in April 06 Toffler discussed a raft of programming initiatives designed to further broaden the MTV platform into the mobile realm, including a slate of made-for-mobile music programming.

5.2.3 Mobile Streaming Radio

Mobile-based streaming radio is still a developing format. Miami-based rum manufacturer Bacardi has just announced a mobile and online radio station called Bacardi B Live Radio, which is heavily focused on dance music and club deejays. The stream can be accessed across 3G, 2.75 G (EDGE) and 2.5 G (GPRS) networks, while online listeners can tap into the station using the Windows Media Player. "By being accessible online and through the mobile or cell phone, we're investing in new mediums that resonate with our core consumer's lifestyles," explained John Burke, a global brand director at the company.

The station is slated to officially launch in the United States and the UK in May, though the stream is currently live at bacardibliveradio.com. B Live will also showcase various Bacardi events on the channel, offering far greater branding and reach.

The move represents yet-another music tie-in involving a major brand, though Bacardi is pushing the technological possibilities.

Elsewhere, a digital radio system that would allow instant downloading is edging towards reality in the UK. Just recently, Chrysalis and UBC Media indicated that they would be trialling the digital audio broadcast (DAB) receiver, which will be a BT Movio mobile handheld. In terms of content, the trial will focus on Chrysalis' Heart radio stations, which are geared towards busy adults. The offering could be positioned as a subscription and a-la-carte download play, according to several reports, and will simultaneously send downloads to both the mobile device and PC.

The trial will offer some interesting insights into mobile-based media consumption, especially surrounding streaming audio content. And based on the selected channels, the trial appears to be aimed at an older demographic, which may have cash to burn but time-pressured. So far, the mobile-based multimedia space remains young, both in terms of its development arc and the demographic that it attracts.

Meanwhile, others are pondering similar services. Earlier this week, Sprint Nextel vice president Paul Reddick pointed to a possible download offering involving streaming radio partner Music Choice.

Sony BMG has just licensed its catalogue to Motorola for its upcoming iRadio initiative. iRadio will position the Motorola handheld as the centre of an ubiquitous music listening experience, and will offer over 435 commercial-free music channels. The company is showcasing the offering at CTIA Wireless in Las Vegas in April 06, though a firm launch date has not yet been revealed. According to information released by Motorola, the system will "seamlessly transition downloadable, internet radio programming from one location to the next," while transmitting the streams via Bluetooth technology.

5.3 DIGITAL KIOSK MARKET

Music mega-retailer Trans World Entertainment - operator of the f.y.e., Sam Goody, Wherehouse, and Strawberries chains - has just grabbed a bigger share of the digital kiosk market. The company has recently acquired an interest in Mix & Burn, LLC, which offers a range of kiosk-based digital music options.

As their name implies, kiosks include the ability to create digital playlists and burn them onto CDs, though the company also pointed to upcoming portability involving music players, cell phones and portable video players.

"The Mix & Burn acquisition will enable our retail locations to offer customers a best-in-class in-store entertainment experience that will lead to the sale of new content, new products and new services, including music players, cell phones and cell phone service plans," said Jim Litwak, president and COO of Trans World Entertainment.

The Trans World deal follows an earlier kiosk rollout involving Tower Records and Denver-based TouchMedia. Those installations, announced earlier this month, involved 330 custom digital media stations throughout 89 Tower locations in the US. The TouchMedia technology has been integrated into existing CD listening stations, offering interactive touch screen media discovery, preview capabilities, and the ability to port promotional music to portable storage devices. The stepped-up installations followed a six month trial, which showed a "positive impact on sales, store efficiency and customer satisfaction," according to the companies.

6. P2P FILE SHARING

P2P file-sharing from organizations like FastTrack, Gnutella, eDonkey, BitTorrent, Limewire, WinMX, and SoulSeek is also exhibiting continued rapid growth, and continues to threaten legal paid-for services.

Over the past two years, the average number of simultaneous sharers has nearly doubled, according to data tracker service BigChampagne.

File-sharing is having a profound impact on British music revenues, according to a recently-issued report from trade group BPI. Specifically, the group pointed to lost sales of £1.1 billion (\$1.93 billion) over a three-year period, based on reduced music expenditures among file-sharers. London-based research partner TNS analyzed consumer spending behaviour over time, comparing file-sharing users against the overall buying population. TNS asserts that spending among file-sharers dipped 16 percent during the past year, compared to a 2 percent dip among the broader market.

The exact effects of file-sharing are incredibly hard to pinpoint, though recent sales trends in the region are eye-opening. According to BPI figures released in early January, sales of artist albums - which are differentiated from compilation discs - increased 1.4 percent in 2005, an improvement on a record 2004 period. "This high comes after six years of year-on-year growth in artist album sales from 87.7 million in 1999 to 126.2 million in 2005, an increase of 44 percent in just six years," the BPI report noted. That helped to offset a 16 percent decrease in compilation discs during 2005, and soften the overall market decline to 2.7 percent. Whether that trend is being propelled by file-sharing activity is difficult to determine, though it is plausible that cherry-picking downloaders are shying away from pre-recorded compilations and boosting artist albums.

On the regulatory side, the US Supreme Court has recently ruled that file-sharing companies could be held liable for copyright infringement if they actively induce the theft of copyright material. The definition of "active" inducement, which suggests a reasonably significant encouragement effort, was, however, left to the lower courts to decide. P2P executives, including eDonkey CEO Sam Yagan, have avoided a drawn-out legal process and are expected to announce paid versions of their services. StreamCast CEO Michael Weiss, the parent company of the Morpheus P2P application, on the other hand, is open to testing the active inducement standard. "We haven't induced anybody to do anything since day one," said Weiss. "We're not going to lose this," he predicted.

And, P2P services are being further legitimized by giant corporations like Coca Cola. Consumer brand behemoth Coca-Cola is once again dipping its toe into the digital music arena, this time with a P2P-based branding play. The soft-drink giant has just launched a promotional music destination called Stageside, which encourages viral music distribution across a number of platforms. Those delivery mechanisms include BitTorrent, Gnutella, and FastTrack, and video segments are optimized for viewing on PlayStation Portables (PSPs), iPods, or computer screens. The first artist on the bill is Ne-Yo, who is being showcased in a behind-the-scenes format. According to the newly-launched destination, other offerings include live performances and interviews, all of which will be available at no charge.

For Coca-Cola, the effort follows several digital music initiatives and experiments. The company currently has a handful of "mycokemusic" digital music stores, including destinations in New Zealand, the UK, and Switzerland. And in September of last year, the company began experimenting with a select group of vending machines, offering mobile phone downloads alongside Coke purchases. Now, Stageside is piggybacking the ever-growing file-sharing community, a move that Coca-Cola hopes will broaden the appeal of its brand. Overall, Stageside is part of a fresh marketing campaign called "the Coke side of life," which portrays the brand in a sunny, optimistic light. Meanwhile, Hollywood Reporter notes that viral internet market firm Jun Group will be powering the production, distribution, and even tracking of content online for Coca-Cola.

New Russian download service AllofMP3.com is a rogue service masquerading as a legal download store, offering unauthorized tracks for pennies. Now, AllofMP3 is gaining major ground in the British market, according to London-based XTN Data. The group reports that iTunes continues to lead the roost, with a 44 percent lead, though AllofMP3 now carries a second place slot with a 14 percent market share. Napster grabbed third place with an 8 percent share, while Wipit fell to fourth place with 6 percent. MyCokeMusic and Tesco retained marginal market percentages, according to the data.

AllofMP3.com offers a clean interface, and is probably convincing a large number of users that its cut-rate tracks are legal to download. Its Russian domicile makes enforcement difficult, and it is equally tricky for the industry to educate consumers that 9-cent downloads are most likely illegal. Meanwhile, the site could be making an impact in the United States, though the XTN data is focused on the British market. Meanwhile, XTN reported an increase in the number of users admitting to P2P usage. Specifically, 28 percent of respondents in a recent XTN survey indicated that they download music without paying, an increase from 25 percent in September, 2005. While competing with free is always a tough proposition, the XTN study pointed a great deal of blame towards digital music stores and labels. "Clunky software, difficulty in finding tracks, and over-zealous protection limiting where customers can play music they've bought are continuing to fuel file-sharing," said Greig Harper, founder of XTN Data. "The industry is ignoring simple solutions which could see file-sharers head to a legitimate service."

Other players in the free P2P space like LimeWire and eDonkey are increasingly offering paid versions of their applications. SnoCap, a provider of peer-to-peer backend filtering and authorization technology, recently gained a \$15 million round of venture financing. The influx comes at a definitive juncture for the sanctioned peer-to-peer space, which has already seen the introduction of a revamped iMesh, as well as entrant Peer Impact. Unproven at this point is whether consumers are willing to pay for a filtered P2P experience, or if a more straight-ahead digital download store like iTunes satisfies the demand better. The easy availability of free downloads skyrocketed P2P network technology, though it remains speculative if that energy can be duplicated within a paid environment.

Another new entrant is sideload.com created by original MP3.com founder Michael Robertson. Sideload.com acts as a central repository of available, free music on-line allowing the user to easily transfer tracks from the internet to a personal, online collection called Oboe. A massive index of all tracks stored within individual Oboe lockers is then published by sideload.com, and ranked by popularity. Both Oboe and sideload.com are part of the recently-launched MP3tunes. A sideload.com plug-in allows users to bypass the PC entirely, and simply transfer a track directly from a website to an Oboe locker. That eliminates lengthy download times, and allows the user to quickly grab tracks online.

"Because the file is zooming over the core internet between servers, it typically takes just seconds to load a track to your personal locker for permanent storage," Michael Robertson explained to Digital Music News. But that zooming could become annoying to major labels and publishers, based on a casual review of the top-ranked songs on sideload.com. Tracks like "Sweet Emotion" by Aerosmith, "Sunday Bloody Sunday" by U2, "Wake Me Up When September Ends" by Green Day, and "More Than A Feeling" by Boston are all easily accessed and sideloaded to the virtual Oboe lockers. Meanwhile, sideload.com does not host those files, but rather "links to files publicly available other places on the net". Additionally, the site asks copyright holders to advise of any copyright violations. "If you believe in good faith that materials listed on sideload.com infringe your copyright you (or your agent) may send us a notice requesting that the material be removed, or access to it blocked," the FAQ explains.

7. RIGHTS SERVICES and TRACKING

Digital music continues to present a vexing challenge for financiers, particularly because of heavy illegal file-sharing, confusing forecasts, and often-treacherous licensing requirements.

As the digital download market matures, new intermediary services are emerging, particularly involving rights clearance and tracking.

7.1 Digital Music Group, Inc

Formed in 2005, Digital Music Group, Inc. (DMGI) is a middleman in the burgeoning download space, acquiring the digital rights to songs and selling them via online services like iTunes and Napster. The company raised nearly \$40 million in its recent IPO, mostly to acquire additional music licenses. A look at DMGI's present song holdings reveals the music of mostly vintage artists like Fats Domino, the Allman Brothers, and Big Joe Turner.

7.2 RightsRouter

Glasgow, Scotland-based RightsRouter represents music rights for UK, European indie music organizations and is currently working with Matrix Data on rights models and content aggregation.

7.3 IODA

For a growing army of DIY music bloggers and podcasters, the process of properly licensing materials represents a massive hurdle. With that in mind, independent digital distributor IODA has now officially unveiled its Promonet platform. The platform offers pre-cleared content from IODA artists for use by bloggers, podcasters, internet radio stations, social networks, and other outlets. The catalog includes over 7,000 pre-cleared tracks, from about 1,500 IODA-represented independent labels. Built to Spill, Public Enemy, The Wrens, Ryuichi Sakamoto, Young Buck, and the San Francisco Symphony Orchestra are just some of the artists involved in the program. The release follows a beta launch in the fall of 2005.

The move is considered to be a clever one, and increases the distribution possibilities among internet tastemakers. While bloggers often use material illegally, the threat of a lawsuit makes Promonet a far more attractive option. "Our solution uses technology and the viral nature of networks to provide a low-cost, transparent, and results oriented marketing platform to effectively connect independent music with its fans," said Tim Mitchell, vice president of Marketing and Business Development at IODA. Meanwhile, users of Promonet must agree to properly identify music, link to artist and label websites, and offer buy links to at least one digital retailer. To date, during the Promonet beta period, IODA reported nearly 10,000 clicks on purchase links across various blogs and podcasts.

7.4 BigChampagne – media tracking

Although the sheer volume of music traded through P2P networks has created a headache for the recording industry, it also offers nuggets of useful information. File-sharing activity houses a statistical goldmine of consumer tastes and trends, all of which can add guidance to media marketing efforts.

In April 06, media tracking company BigChampagne is unveiling a new service called BCDash, which will offer music and movie companies instant access to ongoing data trends. Already, BigChampagne delivers this information to label and studio clients, though the new dashboard will offer on-demand access to data as it develops. BCDash will combine information from various P2P networks with sales data from paid services to produce detailed activity snapshots on specific titles and genres.

The service will also help companies better understand trends and patterns. "What we're looking for is things that are bubbling up," BigChampagne CEO Eric Garland recently told the Wall Street Journal. "For example, if a music video is watched more in one part of the country, or a song is played more on a particular music service. That information might alert a band that they need to add tour dates in a particular area, or flag a promotion opportunity on a certain website," Garland continued. BigChampagne has rallied several partners on the endeavor, including iTunes, Yahoo Music, AOL Music, and Wal-Mart. BCDash will offer data analysis and forecasting as part of the service, which will cost clients a few thousand dollars a month to start, depending on the type of information culled and dissected.

8. RECOMMENDERS AND DISCOVERY

8.1 Introduction

As the digital music space broadens and matures investors have been watching the emergence of music recommendation technology with interest.

This is because music fans now have access to immense digital libraries, both on-demand and through streaming formats, but there is a perception that finding the perfect gem is now, and will be, increasingly difficult.

Outlets like Rhapsody deliver on-demand access to thousands of albums, while providers like XM Satellite Radio offer just as many niche genres. Many industry experts are now arguing that having everything is only part of the puzzle, and that listeners now usually want someone else to sift through the barrage of possibilities. "Just having access to a sea of material is not going to push the ball forward," said Tim Westergren, head of recommendation service Pandora. Westergren considers that listeners need to be re-energized, many of whom stop discovering music after their teenage years.

iPod and other digital music collections are often random, carrying a mix of ripped tracks, P2P-downloaded songs, and a small number of tracks purchased from digital music stores. To date iPod and iTunes solutions have proved satisfactory with users achieving satisfactory search results by inputting artist, song and album title information. But there is an emerging sense that consumers crave more organization and recommendation, better meta-tagging.

Music players enable control of the individual track, assembly into a playlist and access to it anywhere, and thanks to some simple solutions have become the central nervous system in a ubiquitous listening experience.

However, future generation listeners, used to massive amounts of music at all times, will soon demand a much broader and neatly organized selection with some intelligent suggestions.

As the space evolves, music recognition and recommendation services are expected to become critical elements of digital music services. The logic goes like this: available catalogues will continue to grow, and users will need recommendation services to help them navigate massive libraries. And recommendations depend on accurate recognition, prompting a recent MusicIP patent.

As the music recommendation sector heats up, more discussion is focusing on the best way to suggest a tune. In the old days, music fans relied on friends, radio, MTV, and record shops to do the trick, though new technologies are changing that process tremendously. Some argue that many listeners are still more comfortable with actual deejays and more traditional radio formats. Elise Nordling, music director at SomaFM, pointed to the important companion role that radio plays. Deejays do more than just pick songs, they often build a bond with listeners. "People want company," she said. Meanwhile, music industry consultant and KCRW commentator Celia Hirschman points to the importance of nurturing listener relationships, which are created by establishing trust and maintaining a high level of programming integrity. "The quality of the music is important," she said. Addressing the recent Eliot Spitzer payola probe, Hirschman wondered if big terrestrial giants will ever change. "Radio stations are less likely to work with independent promoters, but the net effect is unclear," she said. Pointing to a format that is focused on big advertising, Hirschman noted that mainstream radio "will probably still go with heavily powered major label stuff," mainly because they are fearful of alienating advertisers and listeners with unfamiliar, new sounds.

Some experts argue that current recommendation systems are not dynamic enough to truly tap consumer passions and build collections. "If you subscribe to a service that gives you a more refined version of what you like, you are not getting anything from left field," observed John Rosso, a senior vice president at ABC Radio Networks, during a Digital Hollywood panel in March 06. Rosso went on to highlight a relatively new terrestrial format known as Jack FM,

which offers a seemingly random mix of tunes instead of a genre-targeted approach. While a Jack playlist may seem scattershot, Rosso pointed to "one of the most highly researched formats in history," part of a growing attempt by traditional stations to stay connected with users and their new, iPod-inspired sensibilities.

Others point to limitations inherent in various recommendation approaches.

Dave Ulmer, a senior director at Motorola, considers the differences between machine-based and human-generated models. According to Ulmer, a machine approach delivers "a stream of songs that sound exactly like each other, like a bad karaoke night," while a human-generated approach "works great, but it's awfully expensive".

And pessimistic voices, including Mercora president and CEO Srivats Sampath, questioned the overall business model. "If listeners don't like a station, they change the channel," he said, pointing to the immense choice consumers have in radio. "We may be trying to solve a problem that doesn't need solving."

Discovery and recommendation may also be challenged by the architectural and GUI design issues with small screens on mobiles as well as increasing content complexity although (as mentioned previously) up-and-coming companies like Melodeo and Groove Mobile have entered the fray.

Overall, consumer consumption of music remains immense and growing, bolstered by heavy iPod storage capabilities and immense P2P and other catalogues. Whether a massive new market opens up for discovery and recommendation remains to be seen, though a range of models - including those from Pandora (see below) , MusicStrands (see below), MusicIP (see below), Siren Systems and even Yahoo – remain ready for some action.

8.2 Pandora

California-based Pandora, recently the recipient of a \$12 million round of financing in November 05, has just announced a deal involving Friendster, the social networking destination.

The deal will allow Friendster users to create personalized radio stations, powered by the Pandora Music Genome Project. Each station will be moulded to the personality of the user, based on preferences expressed. Pandora then maps those preferences against thousands of songs, all of which have been dissected based on hundreds of musical attributes. Moving into the Friendster eco-system, those stations can be shared with other users, adding to the social networking experience. The Friendster announcement follows an earlier tie-up involving Pandora Music and Slim Devices, Inc., which manufactures a wireless stereo bridge called Squeezebox.

8.3 MusicIP

MusicIP calls itself a Global Search Engine for Music. Its Open Fingerprint(tm) Technology has identified and analysed over 17million digital musical tracks that underpin its music personalization and discovery solutions.

The service analyses users' songs and creates playlists from those songs based on similarity with an original chosen song. It identifies digital music using the actual sounds within master recordings. Users can also request recommendations by inputting artists names. Music IP makes recommendations based upon acoustic similarity not just music metadata or other people's opinions about music.

MusicIP's patent is just one part of a competitive strategy. MusicIP released its Open Fingerprint Architecture this month, making its libraries available under an open source license. This lets developers use the track metadata returned by MusicIP's system within any

application they build. Making this information available is a way for the company to undercut existing music identification database services, including those from Pandora, MusicStrands, and Siren Systems.

MusicIP's service is part of a larger system called the Global Music Relationship Engine, which aims to help fans find new music by recommending tracks based on those they already own, and link performers with targeted listeners. Its underlying premise is that most fans and artists need better ways to link up. "It's clear the digital music industry is searching for new effective ways for businesses, artists and distributors to be successful," said Dr. Matthew Dunn, CEO of MusicIP. "With the solutions that we are announcing, and the incredible organizations with whom we're partnering, we are simplifying how listeners, musicians, labels and distributors interact and in turn changing the way fans experience music." Those partnerships include AOL, Applian Technology, BigChampagne, Boombang, Creative Commons, elatinmusic, Hungama, Magnatunes, MusicBrainz, MusicToDigital.com, Orb Networks, .Songs, U3, and Waterloo Records & Video. Already, AOL uses MusicIP solutions within the Winamp player.

Other features of the MusicIP offering include the MusicIP mixer that enables users to send playlists to portable devices, music players and CD burners. MusicIP also invites musicians to submit tracks for analysis by its service and inclusion in the MusicIP database. Where artists require a regular copyright license the service points people to commercial sources but content provided via a Creative Commons license is made available via free download.

8.4 MusicStrands

MusicStrands has just revealed a financing round that topped \$2.3 million, bringing its total funding purse to \$6 million.

In March 06, iTunes executive Atakan Cetinsoy left Apple to recommendation service MusicStrands. Cetinsoy reportedly developed the technologies behind the personalized music recommendation feature of iTunes, which was critically-slammed over privacy concerns. Specifically, bloggers reacted negatively when it emerged that data about individual music libraries were being sent back to Apple, though the company now offers the recommendation service as an optional add-on.