

Comparative Evaluation



iTunes and its competitors

Assignment #4

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iTunes Product Description

iTunes is a digital music application that allows both Windows and Mac users to create and manage their own music library on their computer. Users can rip songs from their favorite CDs to store as MP3s in their digital music library, make their own mixes by creating customized play lists, including smart play lists, and they can then burn them to CD. While listening to music, users can watch visualizations either in the iTunes window or as full screen. iTunes also interfaces easily with iPod, Apple's popular MP3 player, for simple transfer of music from the computer to the iPod. A unique feature of iTunes is the iTunes® Music Store where users can search for and buy music for 99 cents a song without having to subscribe to anything. iTunes can be downloaded free from the Apple website - www.apple.com.

Introduction

In this Comparative Evaluation, Apple's iTunes digital music application will be compared with MusicMatch Jukebox and Windows Media Player, two competitive applications, plus similar features available in Real Player for MacOS X, Roxio Easy Media Creator, and a Sony 400 Disc Progressive DVD/SACD Player.

MusicMatch Jukebox and Windows Media Player are two applications that are very similar to iTunes. On the other hand, Real Player, Roxio, and the Sony stereo will only be compared based on specific features they possess that are similar to some of the features available in iTunes. For example, the stereo cannot burn CDs and it does not have an online music store, but it can be compared to iTunes in terms of how it plays and organizes music.

For each product, we have provided an overview of the product and its features, highlighted its strengths and weaknesses, and then concluded with some comments on the product's aesthetics and usability. At the end of the evaluation is a table that summarizes the features of every product so that we may quickly see where they differ, where some products are found wanting, and where others excel.

iTunes



Sources:

- **Apple.com** - <http://www.apple.com/itunes/>
- **ZDnet Review** - [http://reviews-zdnet.com.com/Apple iTunes 4 7/4505-3669 16-20201986.html?tag=pdtl-list](http://reviews-zdnet.com.com/Apple_iTunes_4_7/4505-3669_16-20201986.html?tag=pdtl-list)

Overview

Apple iTunes is a digital music player that allows you to play your digital music (MP3s AACs, etc.), organize your music library, create play lists, rip and burn CDs, and purchase music from Apple's online store. It also interfaces easily with the iPod, Apple's portable MP3 player. This application is free to anyone who has access to the Internet. iTunes can play MP3s, AACs, and can even convert the WMAs used in Windows Media Player into a compatible form. It also has an online radio with stations to choose from such as Jazz, Blues, different kinds of Rock, Country, and Classical.

Strengths

- Freely available over the Internet.
- Simple, intuitive interface.
- With smart play lists, iTunes can create play lists based on song ratings or information in song metadata tags (genre, album, artist, etc.).
- The online store has the largest online song catalog, is only 99 cents a song, and requires no subscription.
- Interfaces easily with the iPod.
- Play time of entire play list or library is always listed in the application window so you always know the exact length of your music for CD burning purposes.
- Automatic volume limiting to play all songs at the same volume level, and sound enhancement to add depth and enliven the quality of the music.
- Can import and burn music in several different formats.
- Support for video and photos.

- “Crossfading” capabilities (mixing the end of a song with the beginning of another).

Weaknesses

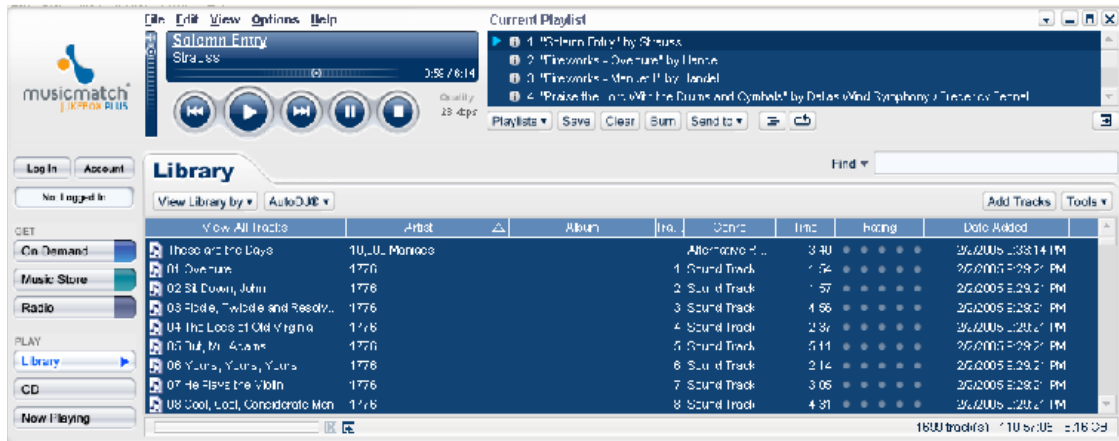
- No song editing.
- Cannot capture external audio sources and convert them into MP3.
- No built in album art retrieval system.
- Cannot create a personalized CD label, only from album art.
- Not compatible with older versions of iTunes.
- Must have at least Windows 2000 or MacOS X.

Aesthetics and Usability

A popular aspect of iTunes is its simple interface. When moving from one area of the application to another the basic interface stays the same, so there is no added confusion of navigation. This is unique among such applications. Most have a more complicated interface that changes when moving from the music library to listening to CDs or to accessing the store. As a result, iTunes is relatively easy to learn and use. When moving from one function to another, irrelevant buttons disappear and are replaced with buttons pertinent to that particular function. That way, a user is not confused with extraneous buttons and tabs that are just taking up useless space.

One annoying feature, however, is when a play list is playing it cannot be stopped, only paused. In order to stop a song and start it over, you must pause and back the song up manually using the rewind button. The only way to actually stop a song is to switch to a different source within the application. For example, if a song from the music library is playing, and the only option available is pause or play. To stop the song, the user must switch to the radio or the party shuffle, for example. At that point, the song is still playing but the stop button replaces the pause button. It is all very peculiar.

MusicMatch Jukebox



Sources

- **MusicMatch.com** - <http://www.musicmatch.com/>
- **ZDNet Reviews** - http://reviews-zdnet.com.com/Musicmatch_Jukebox_100/4505-8033_16-30567399.html?tag=prmo1

Overview

MusicMatch is a ‘do it all’ type of digital music application, similar to iTunes. It plays digital music, organizes the music library, burns and rips CDs, imports music, and has a radio and an online store. It can download songs in several different formats, interface with many portable MP3 players, and has play list features similar to iTunes.

Strengths

- Customizable interface using different skins.
- Share play lists with others who don’t use MusicMatch.
- Supports universal plug and play devices.
- Automatic album art download.
- Can play ripped music on any digital jukebox.
- On Demand subscription easily integrated into the jukebox. On Demand is a feature that allows a user to listen to music without actually downloading the song and saving it to the hard drive.
- Auto DJ supports On Demand tracks. Auto DJ is similar to iTunes’ Smart play lists where it creates a list based on track tag info and song rating systems.
- Can create MP3 files from vinyl, cassette, or microphone using line-in recording.

Weaknesses

- No support for video or photo.
- Basic version is free but Plus version (with more features) costs money.
- Can only burn a CD three times without purchasing the Plus version.
- Complicated interface seems too “play list centric” - users may seek the overall simplicity of iTunes.

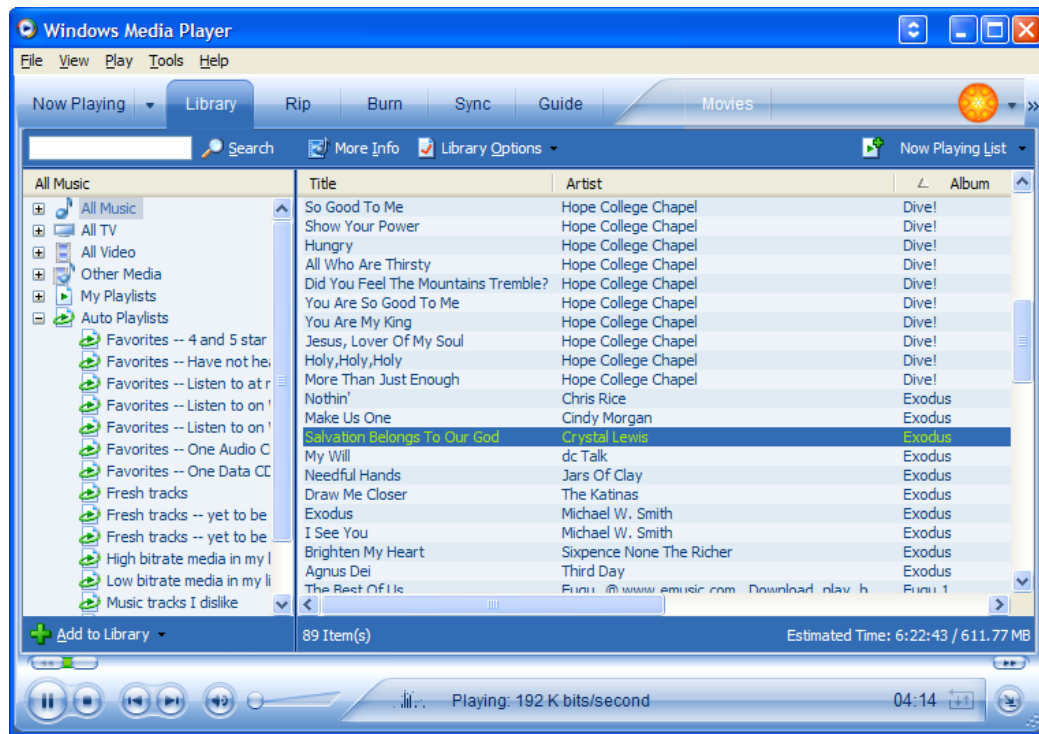
- Available for the PC only.
- Without “cross-fading”, cannot mix the end of one song with the beginning of another.
- No ability to stream music through a computer to be used by other users.

Aesthetics and usability

MusicMatch has what users call a “play list centric” interface. In other words, some users find it to be too focused around play lists, which often leaves them confused and wanting the simplicity of iTunes. Where iTunes’ simple interface encompasses all of the product’s functionality, MusicMatch’s interface excels only in terms of playing music and creating and maintaining play lists. The rest is less user-friendly and is definitely in need of some polishing.

However, the interface in the most recent version is much improved over previous versions. According to satisfied users, MusicMatch’s new interface is now capable of speedier performance and more customization. Customization is definitely a plus, and something that iTunes does not have to the same degree. MusicMatch has its basic skin with a specific color scheme and button design. But a user has the option to change this look based on several provided skins. There is the possibility to download up to 10 different skins with which to customize the interface. They range from red, to blue, green, black and gray.

Windows Media Player 10



Sources

- **Microsoft.com** - <http://www.microsoft.com/windows/windowsmedia/mp10/default.aspx>
- **ZDNet Reviews** - http://reviews-zdnet.com.com/4520-6450_16-5613940-2.html?tag=arrow
- **PCMagazine** (top pick) - <http://www.pcmag.com/article2/0,1759,1641825,00.asp>

Overview

Like iTunes, Windows Media Player 10 is a full-featured tool that is designed to help the user manage all of his or her digital media. While its focus is on digital music, Windows Media Player 10 can also be used to organize TV, video, and other media within the same overall "Library." Available features include buying and importing music, burning CDs, and syncing with a multitude of devices. A graphic equalizer is available to adjust settings while playing music, and there are a wide variety of visualizations to experiment with.

Strengths

- Freely available over the Internet.
- Interface much improved over previous versions.
- Seamlessly organizes and views the full spectrum of digital media: music, TV, video, radio streams and photos.
- Can sync with about 70 mobile MP3 devices.
- Provides integrated browsing of a wide variety of music, sports, TV, and video stores.

- Music Editing tools: “Crossfading” (mixing the end of a song with the beginning of another) and automatic volume leveling for CD burning.

Weaknesses

- Microsoft name (some users do not trust the name so it is an automatic negative).
- Version 10.0 is only available for Windows XP.
- Complex interface and functionality.
- Not compatible with iTunes or iPod.
- No specific music library browse feature, only one criterion can be selected at a time.

Aesthetics and usability

The different window layouts between each major mode (Now Playing, Library, Rip, Burn, Sync) can become confusing to the user. This complexity of interface is in contrast to the extreme simplicity of the iTunes interface. The “Now Playing” button is perhaps the most confusing – clicking it displays your current visualization/album art and current play list, but the overall context of the Library is lost.

In general, Windows Media Player 10 has a much more professional look and feel than its earlier incarnations. The left-hand navigation has been re-labeled and moved into a top navigation bar making it intuitively easy to accomplish basic tasks – the Library, Rip, Burn, and Sync features. Unlike iTunes, where these features are primarily accessible through a single button that changes according to the current mode, these buttons are available at all times. The different skins and visualizations available are fun “extra” features.

RealPlayer 10.0 for MacOS X



Sources

- Real.com – <http://www.real.com>

Overview

RealPlayer for MacOS X is a media clip player that plays both audio and video clips. It lacks any ability to store or organize music files beyond adding the file to your favorites list which is accessible via the application menu, and is similar to the favorites menu of a web browser. There is a content browser that provides access to free and subscription based content available through Real Networks. The browser opens in a separate window. The Windows version is much more feature rich and similar to iTunes, but was not reviewed.

Strengths

- Freely available over the Internet.
- Can play Real Media clips that are found on the web.
- Additional information is displayed in the player window when a clip is playing. For example, if there is a song playing and there is artist information available, it will display this information in the left half of the window. However, advertisements for other related media may also be displayed.
- Provides near DVD-Quality Video with the crisp, clean video quality of RealVideo® 10 over any Internet connection.
- RealPlayer's new design behaves just like your other Mac applications, so playing media is easy.
- Can use RealPlayer to watch and listen to all your QuickTime files.

Weaknesses

- Not capable of ripping or burning CDs.
- Selecting links in the content browser spawns a new browser window, quickly becoming unmanageable.
- No ability to create a music library.
- No search ability.
- All navigation to content is done via the separate browser or menus. There is no way via the player to get back to your previous clips.

Aesthetics and usability

From an aesthetic point of view the interface looks Mac-like, though the program is not all that usable. The content browser is annoying, since it's a scaled down web browser that isn't really integrated into the player. When one clicks on content that can be played, the player window comes to the foreground and resizes according to the clip being played. It's very challenging to find content, and there is no way to manage your own content. The lack of integrated content management presents a challenge to locate media. This is pretty much a basic media player with very limited functionality.

When attempting to find out more information regarding the capabilities of RealPlayer, a visit to their website (<http://www.real.com>) will detect the operating system being used, providing an operating system specific version of the web page. This presents a challenge in gathering information on the capabilities present in versions of the player available for other operating systems.

Sony 400 Disc Progressive DVD/SACD Player (DVP-CX985V)



Sources

- **SonyStyle.com** - http://www.sonystyle.com/is-bin/INTERSHOP.enfinity/eCS/Store/en/-/USD/SY_DisplayProductInformation-Start?ProductSKU=DVPCX985V&Dept=hav&CategoryName=hav_HiFiComponents_SuperAudioCD#specs

Overview

The Sony 400 Disc Progressive DVD/SACD is a home stereo component, which was chosen because of its ability to store and play numerous CDs, in essence acting like a jukebox. With Sony's DVP-CX985V you can access your music with ease and enjoy listening to multiple music formats.

Strengths

- Good audio quality.
- Handles multiple media formats, such as CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW.
- Can play MP3 CDs.
- Can shuffle music play across entire library.

Weaknesses

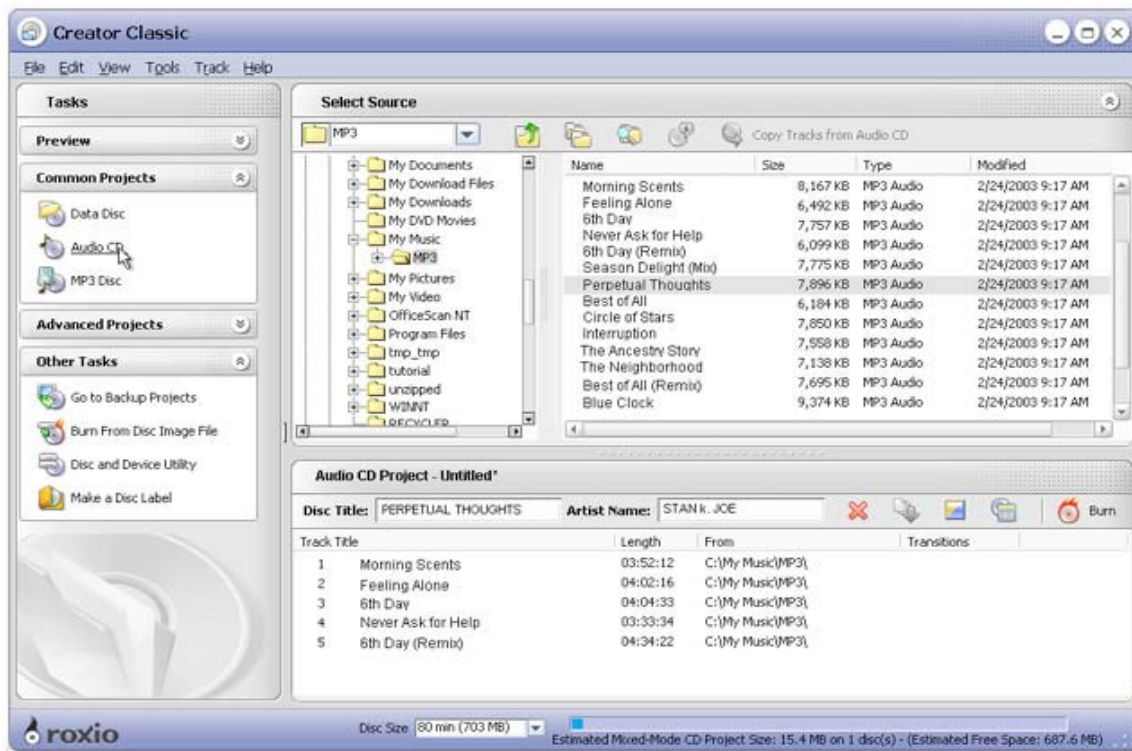
- Music is organized and stored on physical CDs.
- Inability to burn CDs or mix songs from current collection.
- 400 CD limit.
- Organizing music library is cumbersome.

Aesthetics and usability

Not having direct access to this equipment, our assessment is based on information we were able to locate on-line. The basic functionality for playing CDs is similar to a standard CD player. The music library consists of up to 400 CDs that can be stored at one time in the disc changer. Organization of the music library is driven through an on-screen display via the use of a remote

control. Some data is automated from what the player can read from the CD or DVD. Without a computer, this would be an acceptable way to organize your music collection.

Roxio Easy Media Creator 7



Sources:

- **Roxio.com** - <http://www.roxio.com/en/products/ecdc/index.jhtml>
- **ZDNet Reviews** - http://reviews-zdnet.com.com/Media_Collections/4540-3635_16-30790516-3.html?tag=comp
- **CNet** - http://reviews.cnet.com/Roxio_Easy_Media_Creator_7_0/4505-3635_7-30790516-2.html?tag=tab

Overview

Easy Media Creator 7 is loaded with features for creating, editing, and recording all types of digital media. Roxio has integrated several standalone digital media applications within a single tool. Users can create and burn music and data CDs, create and edit video clips, import, edit, and burn video to and from DVDs, and perform simple editing of digital photos and create automated slide shows.

Strengths

- Integrates distinct digital media applications into a single suite.
- Provides users with a powerful and broad set of media-editing tools for photos, video, data, and audio.
- Intuitive interface is easy to use for Windows users.
- Easy Media Creator rivals Apple's iLife toolkit.
- Creator Classic, the CD creation tool, can be used to create data CDs, audio CDs, MP3 CDs, mixed mode CDs, or bootable discs.

- Has more features than a media application that focuses on music only.

Weaknesses

- Users often have problems installing and running the application.
- Heavy-duty tools, like DVD burning, can cause the computer to freeze up.
- Creator Classic is unimpressive compared to iTunes:
 - No built in concept of a music library where music is stored.
 - No easy way to organize music into accessible play lists.
- Primary use is only importing songs, saving them, and burning CDs.

Aesthetics and usability

This is definitely a product created to be intuitive for Windows users. Within Creator Classic, the left-hand ‘task pane’ is amazingly similar to Windows XP-style task lists. There are also lots of situations that employ Windows-style folder navigation. Most users find the interface slick and easy to use. Easy Media Creator’s start up window does an excellent job of helping users navigate the complex functionality of the tool – they can select a specific task (grouped by audio, video, photo, etc.) or select a specific application to use (like Creator Classic). However, true Mac users will find the interface much less intuitive.

Feature Comparison Tables

Importing Music

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
Import Music from Computer	Yes	Yes	No	No	Yes	Yes
Rip CDs in different formats	Yes	Yes	No	No	Yes	Yes
Select specific songs to rip	Yes	Yes	No	No	Yes	No
Enter tag info before ripping CD	Yes	Yes	No	No	Yes	No
Create MP3s from external sources	No	Yes	No	No	No	Yes

Organizing Music and Creating Play Lists

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
Edit metadata for songs	Yes	Yes	No	No	Yes	No
Browse Music Library	Yes	No	No	No	Yes	No
Search Music Library	Yes	Yes	No	No	Yes	No
Simple Play lists	Yes	Yes	No	No	Yes	No
Smart Play lists	Yes	Yes	No	No	Yes	No
Sort library based on title, author, album, etc	Yes	Yes	No	Sort of	Yes	No
Play only checked music	Yes	No	No	No	No	No
Duplicate track finder	Yes	Yes	No	No	No	No
Pre-made play lists	Yes	No	No	No	Yes	No

Playing Music

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
Formats	CD, MP3, AAC	CD, MP3, WMA, WAV	?	CD	CD, MP3, WMA	MP3, WAV, WMA
Play song, play list, library	Yes	Yes	Yes	Yes	Yes	Not really
Random shuffle of play list	Yes	Yes	No	Yes	Yes	No
Repeat of play list	Yes	Yes	No	Yes	Yes	No
Repeat of song	Yes	No	No	Yes	Yes	No
Print list of songs in play list/library	Yes	Yes	No	No	Yes	No
Print list of albums in play list/library	Yes	Yes	No	No	Yes	No
View precise and estimated time of play list/library	Yes	Library only	No	No	Yes	No
Miniplayer Mode	Yes	Yes	No	No	Yes	No
Rotating display of album, artist, playtime, etc.	Yes	Yes	No	No	Yes	No
Mute Button	Yes	No	No	Yes	Yes	No

Burning CDs

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
Audio CDs	Yes	Yes	No	No	Yes	Yes
MP3 CDs	Yes	Yes	No	No	Yes	Yes
Data CDs	Yes	Yes	No	No	Yes	Yes
Long play list over several CDs	Yes	No	No	No	No	No
Print CD insert with songs	Yes	Yes	No	No	No	Yes
Check/uncheck songs to be burned	Yes	No	No	No	Yes	No
Print Cover	Yes	Yes	No	No	No	No
Drag and drop to create burn list	Yes	Yes	No	No	Yes	Yes
Can print adhesive CD labels	No	Yes	No	No	No	Yes
Burn specific play list, genre album, or artist	Yes	Yes	No	No	Yes	No
Create a burn list on the fly	Yes	Yes	No	No	Yes	No
Mixed Mode CDs	No	No	No	No	No	Yes
Bootable discs	No	No	No	No	No	Yes
Can copy directly between two discs	No	No	No	No	No	Yes

Buying Music from an Online Store

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
99 cents a song	Yes	Yes	n/a	n/a	Yes	Yes
Store integrated seamlessly into interface	Yes	Yes	n/a	n/a	Yes	No
No subscription necessary	Yes	Yes	n/a	n/a	Yes	Yes
Interfaces with other sites	No	No	n/a	n/a	Yes	Yes

Visualizations

	iTunes	MusicMatch	Real Player	Sony DVD/SACD Player	Windows Media Player	Roxio
One or Many Visualization	One	Many	n/a	n/a	Many	n/a
Full Screen	Yes	Yes	n/a	n/a	Yes	n/a
Application Window	Yes	Yes	n/a	n/a	Yes	n/a
Album Art as a Visualization	No	No	n/a	n/a	Yes	n/a

Conclusions

Comparatively, iTunes does nicely against the competitors outlined in this paper. While other applications reviewed have some advantages, iTunes does not come out lacking in the comparison.

iTunes is definitely preferred to applications such as Real Player for MacOS X because the features cannot even compare. This version of Real Player is so bare that a full comparison should not be made. Real Player is excellent at playing a variety of media clips downloaded from the Internet, but iTunes has more functionality and greater variety of options and is more aesthetically pleasing.

When comparing iTunes to a product like the Sony 400 Disc Progressive DVD/SACD Player, they are obviously two very different products. In terms of playing music, they have the same functionality of being able to store a large amount of songs. However, the stereo has a limited capacity of 400 CDs while the iTunes music library capacity is only limited by the size of your hard drive. They both have the option to shuffle the music library, repeat, but the stereo cannot burn or rip CDs or create play lists.

Roxio can be best compared with iTunes in terms of its ability to rip and burn CDs. It does not have the integrated capacity to play music and manage play lists. Like iTunes, Roxio can import songs in several different digital formats. It can import with or without the album and track info. However, iTunes allows more flexibility in what music is imported. Roxio can only import the entire CD, where iTunes allows users to select specific songs from a CD to add to their music library. In terms of burning CDs, Roxio can burn in all the formats of iTunes (audio, data, MP3) plus mixed mode and bootable CDs. Otherwise, all burning functions are basically the same.

The two applications in this report that are most akin to iTunes are MusicMatch Jukebox and Windows Media Player. They are the same types of “do it all” applications and serve the same function to a media user.

MusicMatch can do just about everything that iTunes can do, plus a few things that are not available in iTunes. For example, iTunes allows a user to check certain songs within a play list to be played and then skips the ones that are not checked. MusicMatch cannot do this. However, MusicMatch can import external sources as MP3 (cassettes, records, microphones) through a data line, which iTunes cannot do. iTunes also has a browse and search function for its music library, while MusicMatch only has a search function. When printing a CD insert/cover, iTunes can only use existing album art, where MusicMatch allows the user to import a picture or collage, use album art, or completely customize a cover. MusicMatch can also print adhesive CD labels, which iTunes cannot do. MusicMatch has multiple visualization modes, where iTunes only has one. However, the biggest complaint about MusicMatch when compared to iTunes is its complex interface. iTunes has a simple interface that provides access to a high degree of functionality. MusicMatch does not, and this is a big reason for why users prefer iTunes over MusicMatch. Plus, iTunes is free and the best version of MusicMatch is not. One additional thing to note is that MusicMatch has the slowest burn time of Windows Media Player, Roxio, and iTunes.

Windows Media Player is similar to both iTunes and MusicMatch in the way that it covers a wide range of functionality. As in iTunes, users can rip songs in several formats, edit album and track tags before ripping music, and select specific songs to rip, rather than just the entire CD. Within the music library, iTunes has a better browse function. Unlike MusicMatch, Windows Media Player does have browse capabilities, but you can only browse by one feature at a time. Where iTunes interfaces with the massive iTunes music store, Windows Media Player integrates with multiple online stores where users can purchase a variety of music, TV or video tracks. Basically, Windows Media Player is the closest to iTunes functionality of all the products mentioned in this analysis. The biggest difference is again with the interface. Like MusicMatch, Windows Media Player has a more complicated interface, and users sometimes prefer the simple interface of iTunes.

Compared with its competitors, iTunes ranks extremely well. With the largest single online store, a simple interface, and a wide range of functionality, it does not leave much wanting in the world of digital music management. One of the few drawbacks is that if you download music from the iTunes store, you can only play them on iTunes. Since most iTunes users never leave for another product, this does not cause many problems. One user said “iTunes is great, and it will only get better.”