A method of adding content to a portable entertainment device, comprising identifying DRM capabilities of the portable entertainment device, defining a first set of content, defining a second set of content which is comprised of content selected by a user from the first content set, identifying content which is not compatible with the DRM capabilities of the portable entertainment device, and obtaining rights which allow at least a subset of the identified content to be copied to the portable entertainment device. The method also allows new content to be periodically added to the portable entertainment device. Also disclosed is a user interface through which the user can build a list of content to be copied to the portable entertainment device and through which the user can obtain any necessary rights to such content.
Define set of content available to user

Identify DRM capabilities of portable entertainment device

Allow user to select content to be transferred to device from set of available content

Does device have DRM capabilities compatible with content selected by user?

Yes → Allow content for which appropriate rights have been obtained to be transferred to device

No → Obtain rights to selected content

Figure 1
Figure 2
Transfer Error

The track(s) below could not be transferred to your portable device:

Device or device firmware not subscription-compatible: 07-0: Queen - Gimme The Prize (Kuigan's Theme). wma

This could be a licensing error. You may be able to resolve it by relicensing the track(s). Go to My Music, right-click the track, select Edit > Reacquire License. Then try transferring again.

Would you like to find out more about device transfer errors and possible solutions?
A playlist size to fit the free space on your device will be made from the items you choose above. Tip: Use the 'Erase Device' button in the main device view before synchronizing to free up space for new tracks.
PORTABLE MEDIA DEVICE INTEROPERABILITY


[0002] This application includes material which is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the patent disclosure, as it appears in the Patent and Trademark Office files or records, but otherwise reserves all copyright rights whatsoever.

FIELD OF THE INVENTION

[0003] The present invention relates to the field of portable media reproduction devices, and more specifically to the creation and maintenance of playlists for portable media reproduction devices.

BACKGROUND OF THE INVENTION

[0004] The advent of computers has greatly changed how users transport and access music, movies, television shows, photographs, and other sensory-stimulating content. Perhaps one of the biggest drivers in recent years is the advent of the Motion Picture Entertainment Group Layer 3 ("MP3") standard for audio encoding, and the resulting cadre of portable devices capable of playing audio encoded in the MP3 standard. From cellular telephones, such as the Audigox SMT 6500 Smartphone, to portable digital assistants ("PDA's"), to specialized devices such as the iPod line of portable entertainment devices by Apple Computer, Inc. of Cupertino, Calif., the Zen and MoVo lines of portable entertainment devices by Creative Technology, Ltd., and the iRiver line or portable entertainment devices by iRiver Incorporated of Seoul, South Korea, a wide variety of products are available which allow people to take their favorite music and other content with them wherever they go.

[0005] However, such devices often pose unique problems for users. Although the devices can carry tens of thousands of pictures, several thousand songs, hundreds of hours of television shows, or other such single- and multi-media content, the users can become bored with accessing the same content over and over, even where the order and/or frequency of playback is determined through one or more playlists. Thus, users frequently wish to update their portable entertainment devices with new content.

[0006] Users can add content to a portable media device through a variety of means. With respect to music content, such means include creating one or more MP3 files from songs on a compact disc ("CD"), tape, or phonograph, a process referred to as "ripping". While ripping is popular, it requires that users visit a bricks-and-mortar or online retailer, purchase the CD or other physical copy of the content, and then take the time to convert the content file or files into the desired format. This is both time consuming and technologically challenging for many consumers. To help facilitate users gaining access to larger music libraries, and thus allowing them to enhance the scope of content available on a portable media device, some services have been launched through which a user can download an MP3 or other content file from an online music source.

[0007] Several different content sources have become available in recent years, and many use differing business models. One business model, supported by the Yahoo! Music Service offered by Yahoo!, Inc. of Sunnyvale, Calif., is the "tethered-download" or subscription model. In this model, users pay a flat fee to download content files from a central source to their home computer. This flat fee is typically relatively low because content downloaded from such services is protected using digital rights management ("DRM") technology, and will frequently expire (i.e. cannot be played or accessed) if the user stops subscribing to the service. Some services allow the downloaded content to be transferred to portable entertainment devices, where the devices support DRM.

[0008] While such services have gained in popularity, not all portable entertainment devices support digital rights management, and some services require different forms of digital rights management. Thus, unless a user has a DRM-compatible portable entertainment device, the user is not able to take full advantage of the content provided by such services.

SUMMARY OF THE INVENTION

[0009] Accordingly, the present invention is directed to a system and method creating playlists for portable entertainment devices, and for obtaining appropriate DRM rights for the content in such playlists, that substantially obviates one or more of the problems due to limitations and disadvantages of the related art.

[0010] It is an object of the present invention to provide a method of adding content to a portable entertainment device, comprising identifying digital rights management capabilities of a portable entertainment device onto which content is to be added; defining a first content set, wherein at least one content attribute is associated with each member of the first content set; defining a second content set, wherein the second content set is comprised of content selected from the first content set whose content attributes match those selected by a user; identifying as a third content set that content in the second content set which is not compatible with the digital rights management capabilities of the portable entertainment device and/or rights of the user; obtaining rights which allow at least a subset of the third content set to be transferred to the portable entertainment device; and, allowing the content defined in the second content set and for which appropriate rights have been obtained to be transferred to the portable entertainment device.

[0011] It is a further object of the invention to provide a user interface for defining content to be transferred to a portable entertainment device, comprising a list of available content, a selected content list, and a transfer content user interface element, wherein the user interface allows content from the list of available content to be added to the selected content list, wherein content in the selected content list for which the user has appropriate rights to allow the content to be transferred to the portable entertainment device are presented differently than other content, and wherein, upon activation of the transfer content user interface element, rights are obtained to transfer to the portable entertainment device any content in the selected content list for which the user does not have appropriate rights.

[0012] Additional features and advantages of the invention will be set forth in the description which follows, and
in part will be apparent from the description, or may be learned by practice of the invention. The objectives and other advantages of the invention will be realized and attained by the structure particularly pointed out in the written description and claims hereof as well as the appended drawings.

[0013] An embodiment of the invention is implemented as part of content management software for portable entertainment devices. The software allows a user to easily build one or more “playlists”, or lists of content to be transferred to a portable entertainment device, and to associate the playlist with a given portable entertainment device such that changes to the content in the playlist are automatically transferred to the portable entertainment device when the portable entertainment device is synchronized or otherwise connected to a content source, or such a content source is made available to the portable entertainment device. Such content sources may include, without limitation, content stored on a computer associated with the user, content stored remotely on a server, and content available from other users.

[0014] In a preferred embodiment, playlists may include individual content entries selected by the user (such as by dragging and dropping entries from a list of available content onto the playlist), and/or rules by which content available to the user can be selected for inclusion in the playlist. By way of example, without intending to limit the present invention, a playlist rule may indicate that all content by the user’s three favorite artists are to be given the highest priority, and that randomly selected content of a specific genre is to be given the next highest priority. The software can then select from the available content that content which meets the user-defined rules and can add such content to the playlist.

[0015] The software can also preferably monitor content added to a playlist and automatically determine whether the user has the rights necessary to allow the content to be transferred to the portable entertainment device. By way of example, without intending to limit the present invention, the portable entertainment device may not support DRM, or may not support a particular DRM method, thus the user may not be authorized to copy the currently-available content file to the portable entertainment device. In such instances, the software can ask the user whether rights should be obtained which permit the content to be copied to the portable entertainment device and, where the user authorizes obtaining such rights, the software can automatically obtain the rights for the user.

[0016] In one embodiment, the software also provides visual feedback to the user regarding the DRM licensing status of particular content with respect to a given portable entertainment device. Such feedback may include, but is not limited to, displaying the title, artist, track, or other information associated with content for which the user does not have an appropriate DRM license in a different font, altering the color of the font, altering the background behind the text, striking through the text, drawing a box around the text, or the like. Furthermore, the software may order the playlist so that entries corresponding to content for which appropriate licensing information is not available appear at the bottom or top of the playlist, or in an alternative window or portion of the window associated with the playlist.

[0017] The software can also allow new content to be added to a portable entertainment device. Such content can be selected based on the contents of a playlist. By way of example, without intending to limit the present invention, a user’s preferences may be determined based on the frequency with which an artist or genre appears within a playlist, based on the frequency with which a particular content file is played by the user, based on the user’s ratings of different content within the playlist, or combinations thereof. The software can then select new content that has similar characteristics to those preferred by the user and the new content can be added to the playlist, thereby allowing the user to access new content. Similarly, rules associated with a playlist may be used to select appropriate content.

[0018] Where a portable entertainment device is capable of storing new content, the new content can merely be added to the device. However, where the device is too full to allow new content to be copied thereto, the software can substitute the new content for content in the playlist associated with the device. The user can preferably control the number of playlist entries and/or content files that can be substituted, and the frequency with which such substitutions may occur. The user can also preferably control the manner in which the software chooses a content file or files for which the new content is to be substituted. By way of example, without intending to limit the present invention, the user may choose the content files to be removed, the user may choose to have the lowest rated content removed first, or the user may choose to have the least frequently accessed content removed first.

[0019] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the description serve to explain the principles of at least one embodiment of the invention.

[0021] In the drawings:

[0022] FIG. 1 is a block diagram illustrating a method through which content can be added to a portable entertainment device.

[0023] FIG. 2 is a block diagram illustrating a network architecture through which content can be added to a portable entertainment device.

[0024] FIG. 3 is a screen capture illustrating a user interface through which individual content files can be added to a playlist.

[0025] FIG. 4 is a screen capture illustrating an alternative user interface through which DRM licensing information is displayed to a user.

[0026] FIG. 5 is a screen capture of a user interface through which DRM licensing information is displayed to a user.

[0027] FIG. 6 is a screen capture illustrating a user interface through which DRM licensing information can be acquired or reacquired.
FIG. 7 is a screen capture illustrating a user interface through which DRM license acquisition status information is conveyed to a user.

FIG. 8 is a screen capture illustrating a user interface through which a playlist can be associated with a portable entertainment device.

FIG. 9 is a screen capture illustrating a user interface through which a playlist can be automatically filled with content based on user preferences and/or rules.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings.

An aspect of the present invention allows a user to easily obtain rights to content such that the content can be copied to a portable entertainment device. The rights necessary may vary depending on the DRM capabilities of the portable entertainment device and rules related to the copying of such content set forth by the content’s author, publisher, or other content provider. By way of example, without intending to limit the present invention, a content provider may agree that a user can copy any song from a music library to a portable entertainment device that supports Windows Media DRM, published by Microsoft Corporation of Redmond, Wash., because such devices can prevent users from distributing the content. While the content provider may prefer the control a Windows Media DRM-enabled device provides, the content provider may wish to limit only selling or licensing content to users with Windows Media DRM-enabled devices. Thus, the content provider may decide to charge an additional fee if the user wishes to transfer the content to a device that does not support Windows Media DRM, in an effort to discourage content piracy. Although reference is made to only two types of DRM-enabled devices, specifically non-DRM enabled devices and Windows Media DRM-enabled devices, it should be apparent to one skilled in the art that alternative DRM arrangements, including providing support for a plurality of DRM solutions, may be substituted therefor without departing from the spirit or the scope of the invention.

FIG. 1 is a block diagram illustrating a method through which content can be added to a portable entertainment device. In Block 100 of FIG. 1, a set of content is defined which includes content available to the user. Such content may include, but is not limited to, content ripped by the user, content available to the user by virtue of the user having subscribed to a content provider, and content available for a fee from another source. In a preferred embodiment, such content will have at least one attribute, such as, without limitation, access frequency, size, artist, actor(s), title, genre, producer, director, album, track, scene, or the like associated therewith. Such attributes typically simplify identifying content files and allow users to more easily find and access the associated content.

As described above, not all portable entertainment devices support all of the various DRM technologies that exist, and most current DRM technologies are not interoperable. Thus, it is advantageous to content providers that portable entertainment devices that support the content provider’s preferred DRM technology be readily identified, thereby allowing the content provider to give users access to DRM-protected content where possible, and to identify where alternative licensing architectures must be utilized.

In Block 110, the DRM capabilities of the user’s portable entertainment device are identified. Such DRM capabilities may be determined through a variety of means including, without limitation, by polling the portable entertainment device for its DRM capabilities, cross-referencing a device identifier associated with the portable entertainment device with a list of known device identifiers associated DRM capabilities, and retrieving the model and software revision numbers associated with the portable entertainment device and cross-referencing these against a list of known DRM capabilities.

In Block 120, the user selects content to be transferred to the device from the set of user-accessible content. In one embodiment, this user-selected content can be stored in a playlist associated with the portable entertainment device, thereby facilitating maintenance of the content stored on the portable entertainment device.

In an alternative embodiment, if the user so chooses, new content can be added to a playlist associated with a portable entertainment device at user-defined intervals, thereby adding variety to the content available to the user via the portable entertainment device. By way of example, without intending to limit the present invention, if a user has a favorite artist, new content created by that artist can be copied to the portable entertainment device when the new content becomes available. As another example, the user’s content preferences can be determined by analyzing the attributes associated with the contents of a playlist. These preferences can then be used to identify content similar to that preferred by the user, and thereby allow the user to access content with which the user is not familiar, and to which the user may not otherwise have had access. Such similarities may be based on user preferences as evidenced by a playlist, including the frequency with which specific content is accessed, the user’s ratings of specific content, and the like. The similarities may be based on general content attributes, such as those described above, or based on rhythm, words appearing in the lyrics or script, themes, orchestration, colors, settings, character types, or other such characteristics.

New content can be added to the playlist when requested by the user, or at pre-defined intervals, such as, without limitation, daily, weekly, or monthly. Similarly, the last date on which content was accessed can be used to determine when new content should be substituted for the content. By way of example, a user may specify that any content that has not been accessed with the past two months is to be removed from the portable entertainment device, and new content substituted therefor.

New content can be substituted for another entry or entries in a playlist associated with a portable media player, as necessary, based on one or more criteria. Such criteria can include, but are not limited to, the space available in the portable entertainment device, the number of content files supported by the portable entertainment device, and the like. Selection of content to be removed from a playlist can occur based on a variety of user-selectable options. By way of example, without intending to limit the present invention,
the user may select the content to be removed. Continuing the example, the content may be automatically removed based on the frequency with which the content has been accessed by the user; the user’s rating of the content; the user’s preference for a given genre, artist, or the like; or combinations thereof. Such preferences may be determined based on the content comprising the playlist.

[0040] In Block 130, the DRM capabilities of the portable entertainment device are compared to the DRM attributes associated with the content to be transferred to the device. In Block 140, where the portable entertainment device’s DRM capabilities are compatible with those of the selected content, and where the content’s DRM attributes permit the content to be copied to the portable entertainment device, the portable entertainment device is permitted to copy the content, or the content is copied to the portable entertainment device, as appropriate for the particular device.

[0041] Where the portable entertainment device’s DRM capabilities are not compatible with those of the selected content, or where the portable entertainment device does not support DRM, the appropriate rights are obtained for the content. In a preferred embodiment, the user can select from a variety of rights-authorization modes. One such mode allows the user to indicate that all necessary rights to content to be transferred to a portable entertainment device should be automatically obtained without further user intervention. Another mode allows the user to indicate a set of content, or content whose attributes match certain rules, for which appropriate rights are to be automatically obtained. Still another mode requires user intervention for each content file for which rights must be obtained. The set of modes described above is intended to be exemplary, and it should be apparent to one skilled in the art that alternative modes may be substituted therefor, or added thereto, without departing from the spirit or the scope of the invention.

[0042] While FIG. 1 presents blocks 100 through 130 as occurring in a particular order, it should be apparent to one skilled in the art that alternative orders may be substituted therefor without departing from the spirit or the scope of the invention.

[0043] FIG. 2 illustrates an exemplary architecture through which the present invention can be implemented. In the embodiment illustrated in FIG. 2, it is assumed, as is standard at the present time, that portable entertainment device 210 has limited communication and/or storage capabilities, or that portable entertainment device 210 may not have as consistent access to Internet 230 and resources provided thereby as user computer 200, and thus it is preferable to have portable entertainment device 210 obtain content from a local resource such as user computer 200. However, it should be apparent to one skilled in the art that alternative content acquisition means, such as, without limitation, allowing portable entertainment device 210 to directly access Internet 230, or allowing portable entertainment device 210 to communicate directly with server 260 or content database 270 via a dedicated communications means, can be substituted therefor without departing from the spirit or the scope of the invention.

[0044] In the embodiment of FIG. 2, content is provided by content provider 230 to one or more user computers 200 via Internet 220. In the illustrated embodiment, content provider 230 employs a redundant architecture to provide improved availability, reliability, and scalability. While a redundant architecture is preferred, it should be apparent to one skilled in the art that a single server may be substituted therefore without departing from the spirit or the scope of the invention. Similarly, although a redundant architecture with only two of such hardware device is illustrated, it should be apparent to one skilled in the art that additional hardware devices can be added, or hardware devices removed, without departing from the spirit or the scope of the invention.

[0045] In the illustrated embodiment, routers 240 facilitate proper traffic flow between Internet 220 and other hardware employed by content provider 230. Router 240 may also provide firewall protection and other such services.

[0046] Routers 240 are communicatively coupled to hub/load balancers 250. Hub/load balancers 250 can preferably monitor the capabilities, workload assignments, and response times for each of servers 260. This allows hub/load balancers 250 to select the appropriate server or servers for any new incoming service requests.

[0047] In the illustrated embodiment, servers 260 preferably provide an interface to content databases 270. Servers 260 preferably authenticate users, control user access to content stored in content databases 270, monitor DRM rights associated with content stored in content databases 270, provide user computer 200 with a list of DRM compatible devices, and perform other such functions. Servers 260 preferably use hypertext markup language (“HTML”), eXtensible Markup Language (“XML”) or other structured language to provide such an interface. In one embodiment, user computer 200 employs a browser or other software application capable of receiving HTML or XML information from servers 260 and converting this information into a user-readable form.

[0048] Users accessing user computer 200 can preferably select content to be downloaded and stored locally on user computer 200, to access content streamed to user computer 200 via content provider 230, and the like. As described above with respect to FIG. 1, where the DRM capabilities of portable entertainment device 210 are consistent with the DRM rights of a given content file, the user can transfer content from user computer 200 to portable entertainment device 210 via a wired or wireless connection. This can be done, for example, by associating a playlist stored on user computer 200 with portable entertainment device 210.

[0049] Another aspect of the present invention is the provision of a user interface through which playlists can be created, associated with a portable entertainment device, and maintained. Exemplary embodiments of such a user interface are illustrated in FIGS. 3 through 9. In the embodiment illustrated in FIG. 3, content is made available to the user from a plurality of content sources, including subscription service 310 and local content 320. When the user selects a content source, the user is presented with a list of available content. Such content can be organized based on one or more content attributes. In the illustrated embodiment, the content is organized by genre, with individual content entries listed in content pane 350. The user can select one or more content entries from content pane 350, and drag them to playlist area 330, where they are listed as content entries 380. When the user is satisfied with the content in playlist area 360, the user can store the playlist by clicking Save button 390.
playlist will then appear under playlists 340. When the user is ready to transfer the content listed in the playlist to a portable entertainment device, such as one of the portable devices listed in portable devices list 330, the user can click Actions button 370 or otherwise interact with a user interface element to initiate the content transfer.

[0050] In a preferred embodiment, as content is added to playlist are 360, the DRM attributes of the content are compared to the DRM capabilities of a portable entertainment device with which the playlist is associated. If the DRM capabilities are incompatible, the user interface preferably indicates the incompatibility to the user. In the embodiment illustrated in FIG. 3, content entries 300 are incompatible with the portable entertainment device, and the content entries are highlighted. In alternative embodiments, alternative means for indicating DRM incompatibilities may be used, including, without limitation, striking through the content entries, using a bold or italic font, using an alternative font, using an alternative font color, placing a DRM-associated icon next to or near the content entry, such as burnable icon 400 of FIG. 4, and the like.

[0051] Where the DRM capabilities of the portable entertainment device are incompatible with those of one or more content files, or where rights have not yet been obtained to one or more content files, a dialog box or other user interface element similar to that of FIG. 5 can be presented to the user. Such a dialog box preferably identifies the content with which the DRM capabilities of the portable entertainment device are incompatible and provides instructions to the user as to how to remedy the incompatibility.

[0052] In one embodiment, the user interface preferably allows the user to specify whether any necessary DRM rights are to be automatically obtained or whether such rights should be obtained through various degrees of user interaction.

[0053] FIG. 6 illustrates an exemplary user interface through which additional licensing can be acquired, and through which current licensing, such as licenses obtained via a subscription, can be reacquired. In the illustrated embodiment, the user's preference for license reacquisition or acquisition is determined by the context within the user interface. That is, where the content list is the list of all available content and where the content is subscription content, the user interface can presume the user wishes to reacquire a license. Where the content list is a playlist associated with a portable entertainment device, the user interface can presume the user wishes to acquire a license that allows the content to be copied to the portable entertainment device.

[0054] In FIG. 6, when the user right-clicks or otherwise interacts with content from a content list associated with a portable entertainment device, the user can then navigate the resulting menu to access Reacquire License 600. By clicking on or otherwise interacting with Reacquire License 600, the user can initiate acquisition of an appropriate license. It should be apparent to one skilled in the art that although multiteried menus are illustrated as the means through which the user instructs the user interface to acquire new licenses or to reacquire licenses, alternative user interface elements, such as, without limitation, buttons or single-tiered menus, may be substituted therefor without departing from the spirit or the scope of the invention.

[0055] In a preferred embodiment, the user is advised as to the status of any license acquisition or reacquisition via a dialog box or other user interface element such as dialog box 700 of FIG. 7. By way of example, without intending to limit the present invention, status information may also or alternatively be presented in status bar 710. The status information may also include the cost of any necessary licenses, and can allow the user to authorize payment of such costs. Payment can be made at that time via a credit card, debit card, or debit account associated with the user, or by adding the cost to the user's monthly fee. It should be apparent to one skilled in the art that alternative payment means may be substituted for those described herein without departing from the spirit or the scope of the invention.

[0056] FIG. 8 is a screen capture of an exemplary user interface through which the user can indicate one or more synchronization preferences for a given portable entertainment device. In this embodiment, the user can select, by checking checkbox 800, whether content should be automatically synchronized each time the portable entertainment device is communicatively coupled to a content source, such as a local computer or content provider. If the portable entertainment device is to be synchronized, the user can specify the synchronization settings in synchronization settings 810. In the illustrated embodiment, the user can elect to have all available local content synchronized, or to have content associated with one or more playlists, illustrated in Playlists 820, synchronized with the portable entertainment device. Where the user wishes to create a new playlist to be associated with a portable entertainment device, the user can click on build playlist button 830 or other activate another such user interface element.

[0057] Clicking on build playlist button 830 preferably causes a window similar to that illustrated in FIG. 9 to appear. The playlist creation window illustrated in FIG. 9 allows the user to name the playlist in text box 900, and to create rules governing how content is to be added to the playlist. In the illustrated embodiment, the user selects a content attribute type from content attribute type list 910, which causes a list of available content attributes to be listed in content attribute list 930. The user can then select one or more content attributes from content attribute list 930, or select all available content attributes using select all button 920. The user then clicks Create Playlist 940 or otherwise activates another such user interface element to initiate the generation of a playlist according to the rules specified by the user. Once the playlist has been generated, the content associated with the playlist can be transferred to a portable entertainment device using the methods described above.

[0058] While the invention has been described in detail and with reference to specific embodiments thereof, it will be apparent to those skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope thereof. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

What is claimed is:
1. A method of adding content to a portable entertainment device, comprising:
identifying digital rights management capabilities of a portable entertainment device onto which content is to be added;
defining a first content set, wherein at least one content attribute is associated with each member of the first content set;
defining a second content set, wherein the second content set is comprised of content selected from the first content set whose content attributes match those selected by a user;

identifying as a third content set that content in the second content set which is not compatible with the digital rights management capabilities of the portable entertainment device and/or rights of the user;

obtaining rights which allow at least a subset of the third content set to be transferred to the portable entertainment device; and,

allowing the content defined in the second content set and for which appropriate rights have been obtained to be transferred to the portable entertainment device.

2. The method of claim 1, wherein the second content set is represented as a playlist associated with the portable entertainment device.

3. The method of claim 2, wherein additional content is added to the second content set based on the playlist.

4. The method of claim 3, wherein the additional content is automatically added to the playlist.

5. The method of claim 4, wherein the additional content is substituted for the least frequently accessed content in the playlist.

6. The method of claim 1, wherein additional content is added to the second content set based on the attributes selected by the user.

7. The method of claim 6, wherein the additional content is automatically added to the second content set.

8. The method of claim 7, wherein the additional content is substituted for the least frequently accessed content in the second content set.

9. The method of claim 7, wherein the additional content is substituted for a plurality of content based on content size.

10. The method of claim 1, wherein the content attributes are comprised of random, access frequency, size, genre, artist, and album.

11. The method of claim 10, wherein the user can select from a plurality of the content attributes.

12. The method of claim 11, further comprising allowing the user to order the selected content attributes.

13. The method of claim 11, further comprising allowing the user to create rules based on the selected content attributes.

14. The method of claim 1, wherein the second content set is further comprised of content whose content attributes are similar to those selected by the user.

15. The method of claim 14, wherein the degree of similarity is determined at least in part by user rankings of members of the first content set.

16. The method of claim 14, wherein the degree of similarity is determined at least in part by the frequency with which the user has elected to access content from the first content set and attributes associated with the most frequently accessed content.

17. The method of claim 1, wherein rights compatible with the portable entertainment device are automatically obtained for each member of the third content set.

18. The method of claim 1, wherein rights compatible with the portable entertainment device are automatically obtained for at least a subset of the third content set.

19. The method of claim 1, wherein rights compatible with the portable entertainment device are obtained for members of the third content set only after user authorization.

20. The method of claim 19, wherein the user authorization applies to all members of the third content set.

21. The method of claim 19, wherein the user authorization applies to at least one subset of the third content set.

22. The method of claim 1, wherein the digital rights management capabilities of the portable entertainment device include the ability to support content subscription.

23. The method of claim 1, further comprising determining whether rights to content stored on the portable media device have expired and prohibiting access to content for which the rights have expired.

24. The method of claim 23, further comprising obtaining additional rights to the content for which the rights have expired.

25. The method of claim 24, wherein additional rights are obtained for at least a subset of the content for which the rights have expired.

26. The method of claim 25, wherein the additional rights are obtained automatically.

27. The method of claim 25, wherein the additional rights are obtained after user authorization.