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PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032 U S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

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Attorney Docket No.		17002-022500 L	~ =			
First Inventor		Ron Goodman .	72			
Title	Automatic Hie	rarchical Cateogrization of Music by Metadata	9/755			

Express Mail Label No. EL769991701US (Only for new nonprovisional applications under 37 C.F.R. § 1.53(b)) APPLICATION ELEMENTS Assistant Commissioner for Patents ADDRESS TO Box Patent Application See MPEP chapter 600 concerning design patent application contents. Washington, DC 20231 7. CD-ROM or CD-R in duplicate, large table or 1. 🛛 Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) Computer Program (Appendix) 2. Applicant claims small entity status. 8. Nucleotide and/or Amino Acid Sequence Submission See 37 CFR 1.27. (if applicable, all necessary) з. 🛛 Specification Total Pages a. Computer Readable Form (CRF) (preferred arrangement set forth below) b. Specification Sequence Listing on: Descriptive title of the Invention i. CD-ROM or CD-R (2 copies); or - Cross References to Related Applications ii. D paper - Statement Regarding Fed sponsored R & D c.
 Statements verifying identity of above copies Reference to sequence listing, a table, or a computer program listing appendix
- Background of the Invention ACCOMPANYING APPLICATIONS PARTS - Brief Summary of the Invention 9. 🔲 Assignment Papers (cover sheet & document(s)) - Brief Description of the Drawings (if filed) 10. 37 C.F.R. §3.73(b) Statement Power of - Detailed Description (when there is an assignee) - Claim(s) - Abstract of the Disclosure 11. 🔲 English Translation Document (if applicable) 4. 🛛 12. Drawing(s) (35 U.S.C. 113) [Total Sheets Information Disclosure Copies of IDS 1 Statement (IDS)/PTO-1449 Citations 5. Oath or Declaration [Total Pages 13. 🔲 Preliminary Amendment a. Newly executed (original or copy) 14. 🛛 Return Receipt Postcard (MPEP 503) b. Copy from a prior application (37 CFR 1.63 (d)) (Should be specifically itemized) (for a continuation/divisional with Box 18 completed) 15. 🔲 Certified Copy of Priority Document(s) i. DELETION OF INVÉNTOR(S) (if foreign priority is claimed) Signed statement attached deleting inventor(s) 16. Request and Certification under 35 U.S.C. 122(b)(2)(B)(i). named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). Applicant must attach form PTO/SB/35 or its equivalent. Other: Unsigned Declaration/Power of Attorney, Fee 6. Application Data Sheet. See 37 CFR 1.76 Transmittal Sheet 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76: □ Continuation □ Divisional ☐ Continuation-in-part (CIP) of prior application No. Prior application information: Examiner Group / Art Unit: For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. 19. CORRESPONDENCE ADDRESS or 🖾 Correspondence address below ☐ Customer Number or Bar Code Label 20350 (Insert Customer No. or Attach bar code label here) Townsend and Townsend and Crew LLP Name Two Embarcadero enter Address Eighth Floor San Francisco City CA 94111-3834 State Zip Code Country Telephone (415) 576-0200 Fax (415) 576-0300 Name (Print/Type) Charles E Registration No. (Attorney/Agent) 30.077

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SONY Exhibit 1003 SONY v. Creative PTO/SB/17 (11-00)

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	First Named Inventor	RON GOODMAN	25 55
Patent fees are subject to annual revision.	Examiner Name		- T
	Group Art Unit		000
AL AMOUNT OF PAYMENT (\$) 870	Attorney Docket No	17002-022500	
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Name (Print/Type)	Charles E. Kruege	Registration No. Attorney/Agent)	30,077	Telephone	415-576-0200	
Signature	I Yul	Mn	~	Date	1/5/01	

Client Reference No.: CT-1139

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY **METADATA**

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is related to Application No. __/____, ___, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Atty. Docket No. 17002-020800); and Application No. / , , entitled "Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No. 17002-022400), all filed January 5, 2001, the disclosures of which are incorporated herein by reference.

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BACKGROUND OF THE INVENTION

Today, portable consumer electronic devices are more powerful than ever. For example, small, portable music playback devices can store hundreds, even thousands, of compressed songs and can play back the songs at high quality. With the capacity for so many songs, a playback device can store many songs from different albums, artists, styles of music, etc.

Music jukeboxes implemented in software executed by a digital computer and portable MP3 and CD players both provide facilities for forming playlists. For example, the **OOZIC** player, distributed by the assignee of the present application, runs on a host PC and has a playlist feature that allows selection of tracks from the PC's hard disk to be included in the playlist.

As storage capacity increases and songs are compressed to shorter file lengths the number of songs that can be stored increases rapidly. Major problems facing the consumer are organizing and accessing the tracks.

Typically, portable devices have a user interface including a small screen and buttons. Using such a compact user interface to navigate and select among hundreds of songs is inefficient and often frustrating. The display screen can only show a few song titles at one time, and the limited controls make it difficult for a user to arbitrarily select, or move among, the songs.

The creation of playlists is one technique to organize the playing of songs. A set of songs can be included in a playlist which is given a name and stored. When the playlist is accessed, the set of songs can be played utilizing various formats such as sequential play or shuffle.

4 U film miss 1,4 H. H. H. H. H. H. However, the creation of playlists itself becomes problematic as the number of songs increases, since the user often arbitrarily selects songs from a large number of tracks to form a playlist. This selection mechanism: can be fairly tedious; does not necessarily produce playlists that are of interest to the user over the course of time; may not remain up-to-date if new songs are added that logically fit into a previously created playlist (e.g. "Favorites by Band X" might become out of date if a new favorite by Band X is added after the playlist was created); and leads to "lost" songs that are not members of any playlist.

Accordingly, improved techniques for organizing and grouping tracks useful in a portable music player are needed.

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SUMMARY OF THE INVENTION

According to one aspect of the present invention, a technique is provided for organizing tracks on a portable music player by automatically filing tracks in a hierarchical order based on attributes of the tracks.

According to another aspect of the invention, metadata is associated with each track that is used to automatically define the track's appropriate place in the hierarchy.

According to another aspect of the invention, the hierarchy is displayed on the portable music player so that a user can traverse the organizational hierarchy to find individual tracks or find playlists composed of logical groups of tracks.

According to another aspect of the invention, the hierarchy is derived by using metadata associated with the audio content that was obtained through any source of metadata (e.g. CDDB metadata, id3v2 metadata, other obtainable metadata) and subsequently stored with or alongside the file that stores the track.

According to another aspect of the invention, a file is formatted so that an unaltered track is stored as file data and information about the track is stored in file attribute files.

Other features and advantages of the invention will be apparent in view of the following detailed description and appended drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic diagram of a tree structure for hierarchical filing of tracks;

Fig. 2 is a definition file that specifies the hierarchy depicted in Fig.	1;
Fig. 3 is a user's view of the hierarchy;	

Fig. 4 is a schematic diagram of a user interface displaying the hierarchical category structure;

Fig. 5 is a diagram of a file format for storing filed data and file attributes; Fig. 6 is a flow chart depicting steps for filing tracks according to the hierarchical tree structure;

Fig. 7 depicts a tree resulting from searching the tracks; and Fig. 8 depicts a format for a user interface.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of the invention will now be described in the context of a portable personal player that plays audio files stored in memory. The files may be in MP3, way, or other digital formats.

In the presently described embodiment, users are able to see the tracks on their player in some organized fashion other than as a single list of tracks. As will be described in more detail below, in one embodiment tracks are sorted utilizing a tree structure having branches labeled according to types of metadata associated with the tracks

For example, a track recorded as "Golden Slumbers" by the Beatles that appears on their album "Hey Jude" might appear as a track under the album "Abbey Road" as well as a track under the list of tracks by the Beatles. It might appear as a track under the genre "Pop Rock" as well as "Songs from the 60's." Furthermore, the organization can have more complex hierarchies. For example, the category of "Pop Rock" might contain subcategories "British Musicians," "American Musicians" and "Other Musicians". In all cases, the track is automatically filed into all appropriate locations without requiring user interaction.

In the currently defined embodiment, a tree structure is defined by a file having the following structure.

The first line of a TreeDef.inf file contains a version number:

V1.0

Each subsequent line (at least in v1.0) contains lines of the following format: CATEGORY NAME|TRACK TYPE MASK|CATEGORY STRUCTURE

CATEGORY NAMEs are the top-level names of the branch under which tracks are sorted. They include things like "Album," "Artist," "Voice Tracks," "All Tracks," etc.

TRACK_TYPE_MASKs tell which types of tracks are to be filed under this 5 particular branch. The actual value is a hexadecimal numerical value (in '0x' format, e.g. 0x01) generated by ORing the following flags together as appropriate:

```
enum tTrackType
                                                                                                                                                                                                                                                                                                                                                                                                  {
                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kTTNothing=0x00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               kTTSong=0x01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               kTTVoice=0x02,
The Honor of the Honor of the Honor of the Honor of Honor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kTTBook=0x04,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kTTMacro=0x08,
                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kTTPlaylist=0x10
                                                                                                                                                                                                                                                                                                                                                                                               };
```

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So, for example, the "Album" branch has a TRACK_TYPE MASK of kTTSong, because only songs are filed under that branch, but the "All Tracks" branch has a TRACK_TYPE_MASK of (kTTSong | kTTVoice | kTTBook).

Other elements might be added to tTrackType (e.g. kTTVideo) as appropriate. CATEGORY_STRUCTUREs tell how to file the songs based on their metadata information. The CATEGORY STRUCTURE is a string of characters that tell, from left to right, the order of hierarchy. The characters come from the following enum constants:

```
enum tFileTag
                          kFTNone='@',
30
                          kFTTrackType='T',
                          kFTTitle='N',
                          kFTAudioFile='F',
                          kFTArtist='M',
                          kFTAlbum='L',
```

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```
kFTGenre='G',
kFTSource='S',
kFTYear='Y',
kFTArtistCountry='C'

5 };
```

Thus, a CATEGORY_STRUCTURE of LN tells to create a subcategory that is a list of Albums, each of which contains a list of Tracks.

In total, a line like:

10 Album|0x01|LN

Says to create a branch called "Album" which contains tracks of type kTTSong organized first by album name, and then by track name.

The following is an example of a tree definition file similar (though not identical) to the hierarchy presented in the Nomad Jukebox product (the 'B' before each FileTag was used to identify that these are basic tags so that we wouldn't run out of letters in the alphabet as we included more complex metadata – thus each group of two letters represents a level in the hierarchy):

V1.0
Album|0x01|BLBN
Artist|0x01|BMBN
Genre|0x01|BGBN
Voice Tracks|0x02|BSBGBN
Playlists|0x10|BN
Macros|0x08|BN
All Tracks|0x07|BN

Fig. 1 depicts a hypothetical organization hierarchy. The tree shows how tracks might be listed (as leaves in the tree) after having been organized. Example values for nodes in the tree are shown as well. The same track may appear more than once as a leaf in the tree, as described above, if it fits into multiple categories (e.g. a song that appears on the Abbey Road branch would also appear in the Beatles branch). In the example shown, the first branch contains tracks organized by album. As shown in the example, this music collection contains three tracks from "Abbey Road" and three tracks from "Hits from the

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60's". The second branch contains tracks organized by artist, and sub organized by where the artist is from. Thus, a user browsing would first select the "Artists" branch and then choose between "British Artists" and "American Artists". Finally, they would select the particular artist. In the third branch, all tracks are shown.

The tree definition file that would specify the hierarchy shown in Figure 1 is shown in Figure 2.

The first line identifies the version of the tree definition file.

The second line defines the "Albums" branch. The first part of the line, "Albums" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BLBN," defines that the branch lists first the names of all albums (BL) and then tracks on those albums (BN).

The third line defines the "Artists" branch. The first part of the line "Artists" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BCBMBN," defines that the branch lists first the names of all countries where artists in this collection come from (BC) and under those items, the artists' names (BM), and then tracks by those artists (BN).

Fig. 3 shows what a user's view of this hierarchy might be if he/she were shown a fully expanded view of the 6-song tree. Notice that each song appears three times, once in each branch.

In consumer products the tree define file is not edited directly but through a user interface, one example of which is depicted in Fig. 4. An example of a user interface for viewing songs by category and editing the tree structure is depicted in Fig. 4.

An embodiment of the invention is utilized in the Nomad® Jukebox, manufactured by the assignee of the present invention, and described more fully in the copending application, filed on the same date as the present application, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Attny. Docket No. 17002-020800).

In a preferred embodiment, metadata is associated with each track and includes such information as title, genre, artist name, type, etc. In the preferred embodiment, software stored in a portable player and executed by the onboard processor automatically files each track in the correct category utilizing the associated metadata and the tree define file. The program code can be stored in any computer readable medium including magnetic storage, CD ROM, optical media, or digital data encoded on an electromagnetic signal.

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Thus, the user is automatically provided with a powerful and flexible tool for organizing and categorizing the tracks stored on the portable player.

If the tracks are formatted in MP3 format the metadata can be stored in ID3 tags included in the MP3 file. In one embodiment of the invention, the tracks are stored in alternate file format including file data and file attributes. The file data is the music track itself and the file attributes part of the file includes fields of arbitrary size which are used to store metadata characterizing the track stored as the file data. Again this metadata includes information about the track such as title, genre, artist name, type, etc.

There are several advantages to using the alternate file format. Metadata of types not easily included in an ID3 tag can be utilized. Further, the original track format is not changed, so that error correction data such as checksums are valid. Finally, any file format can be used (e.g. WAV, WMA, etc.) because the metadata is stored separately, and thus audio formats that have limited support for metadata can still be stored on the portable player in native format without transcoding. The formatted files are formed by software stored in the portable music player and executed by an on-board processor.

The metadata for each track is utilized to file each track, using the categories defined in the hierarchical structure as described above, without any input from the user.

Fig. 5 is a schematic diagram of the alternative file format including file data in the form of an MP3 track, and metadata fields for holding data indicating the name of the album the track is from, the name of the song, the genre of the song, and the type of track.

A particular embodiment of a file format will now be described. All tracks are created with some set of attributes as shown below:

Definition of TrackInfo Data Field

Field	Offset	Size	Description
Attribute Count	0	2	The number of attribute follow for the track
Attr 1 type	2	2	Binary = 0, ASCII = 1
Attr 1 name len	4	2	Length of attribute name string
Attr1 data len	6	4	Length of attribute data
Attr1 Name	10	N	Attribute name string
Attr 1 Data	10+N	M	Attribute data

••••		
Attr N type		
Attr 1 name len		
Attr1 data len		
Attr1 Name		
Attr 1 Data		

Required Attributes

Attribute Name	Value(s)	Remarks
TITLE	ASCII string	Required By Jukebox
CODEC	"MP3", "WMA", "WAV"	Required By Jukebox
TRACK ID	DWORD	Set By Jukebox
ALBUM	ASCII string	Optional
ARTIST	ASCII string	Optional
GENRE	ASCII string	Optional
LENGTH	In seconds	Optional
TRACK SIZE	In bytes	Optional
TRACK NUM	1-n (track within album)	Optional

These attributes can be subsequently changeable via a host application,

5 running on a personal computer connected to the portable music player.

Fig. 6 shows a flow chart of an embodiment the process used to build the hierarchical database of tracks. It starts by iterating through each track, and, for each track, iterating through each branch to find if the track belongs on the branch, and, if so, where. In this case, the term track could refer to any content, e.g. a music track, a spoken word track, or even a video track

10 even a video track.

Also, the hierarchical catalog of tracks can be used to form playlists in a structured manner. For example, if a user wants to hear Jazz and Blues the entire subcategories can be selected to form one playlist.

An alternative hierarchical catalog generation technique will now be

described. In this alternative embodiment, at system startup and as tracks are added or
changed, the hierarchy is generated as an in-memory tree structure. Each track is added to
the tree using the categories ALBUM, ARTIST and GENRE.

The following example shows the algorithm for adding a track. For clarity, only the attributes used by the tree are shown.

1	(0

TITLE	"Free Falling"	
ALBUM	"Full Moon Fever"	
ARTIST	"Tom Petty"	
GENRE	"Rock"	
TRACK NUM	1	

The following function is executed to build the in-memory memory tree.

Build Tree ()

15 For each track,

Add Track To Category(Album, Track)

Add Track To Category(Artist, Track)

Add Track To Category(Genre, Track)

End of Build Tree

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Fig. 7 depicts a tree which could result from implementing Build Tree() function. Note that "Stardust" does not have any entries for Album or Artist. The host software running on a computer connected to the portable music player could be utilized to add missing attributes to the "Stardust" track and, optionally, edit the title attribute. The Build Tree() function would then reinsert this track in the correct location in the tree.

Fig. 8 is an embodiment of a user interface according to another embodiment of the invention. In this example the root node is labeled "My Configuration" and the Playlist category has been selected and the Playlist subcategory "Meddle" has been selected.

Note that the types of Metadata, in this example, Track Name, Artist, Album, Tempo and Dance, are listed across the top of the screen, and the attribute values for each track are listed in a row across the screen. Various control buttons are displayed to the right of configuration window that facilitate quickly invoking selected processing on a selected track.

The invention has now been described with reference to the preferred embodiments. Alternatives and substitutions will now be apparent to persons of skill in the art.

WHAT IS CLAIMED IS:

1	1. A method, performed by a processor in a portable digital music player,			
2	for filing audio tracks stored on a computer readable media, with each audio track having			
3	metadata associated therewith including category value data for naming attributes of the track			
4	and type data indicating the type of track, said method comprising the acts of:			
5	reading a definition file that defines an ordered hierarchical tree structure, with			
6	the file including category names for naming the branch under which tracks are sorted, track			
7	type information specifying which type of tracks are to be sorted under the branch, and			
8	structure information defining how to file tracks based on associated metadata;			
9	for each track, iteratively determining, base on metadata describing the track,			
10	if the track belongs in the branch, and, for each branch in which the track belongs, traversing			
11	the branch to determine the appropriate location to file the track.			
1	2. The method of claim 1, where said act of searching further comprises			
2	the acts of:			
3	utilizing track type information to file only tracks of a specified type under a			
4	particular branch.			
1	3. The method of claim 1 further comprising the acts of:			
2	for each branch, utilizing category structure information to file tracks in a			
3	specified attribute order.			
1	4. The method of claim 1, where said portable digital music player			
2	includes a display screen and a user interface for interacting with the display, further			
3	comprising the acts of:			
4	displaying the categories and subcategories on the display in a hierarchical			
5	order;			
6	displaying all names of tracks associated with a category or sub-category			
7	when a user utilizes the interface to select a category or sub-category;			

G	utilizing the pointer to access and play a track when a user selects a track
9	name through the user interface. and
10	utilizing the pointer to access and play a collection of tracks within a category
11	or subcategory when a user selects a category or subcategory through the user interface.
1	5. A method, implemented by a processor in a portable digital music
2	player, for associating metadata with audio tracks comprising the acts of:
3	opening a formatted file for each track comprising a file data portion and a fil
4	attributes portion, with the file attributes portion including a plurality of fields corresponding
5	to category types and file types;
6	storing an unmodified audio track in the file data portion of the formatted file
7	and
8	storing category type and file type information about the unmodified track in
9	corresponding fields.
1	6. A method, performed by a processor in a portable digital music player
2	for filing audio tracks, stored on a computer readable media, under categories in an in-
3	memory tree structure, with each audio track having metadata associated therewith including
4	category name data for naming, said method comprising the acts of:
5	upon startup or when a track is added or changed, searching the metadata of
6	each track; and
7	for each track, automatically filing the track by category name under each
8	selected category to form a hierarchical track filing scheme.
1	7. The method of claim 6 further comprising the act of:
2	selecting the categories to be the Album including the track, the title of the
3	track, and the name of the artist that recorded the track.

8. The method of claim 6, where said portable digital music player
includes a display screen and a user interface for interacting with the display, further
comprising the acts of:
displaying the categories on the display in a hierarchical order;
displaying all names of tracks associated with a category when a user utilizes
the interface to select a category;
accessing and playing a track when a user selects a track name through the
user interface. and
accessing and playing a collection of tracks within a category when a user
selects a category through the user interface.

9. A computer program product comprising:

a computer readable medium having program code embodied therein for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

10. A computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each audio track having metadata associated therewith including category name data for naming, said program code comprising:

6	program code, executed by a processor, upon startup or when a track is added
7	or changed, for searching the metadata of each track; and
8	program code, executed by a processor, for each track, for automatically filing
9	the track by category name under each selected category to form a hierarchical track filing
10	scheme.

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY **METADATA**

ABSTRACT OF THE DISCLOSURE

A method, performed by software executing on the processor of a portable

music playback device, that automatically files tracks according to hierarchical structure of 5 categories to organize tracks in a logical order. A user interface is utilized to change the hierarchy, view track names, and select tracks for playback or other operations.

SF 1174925 v2

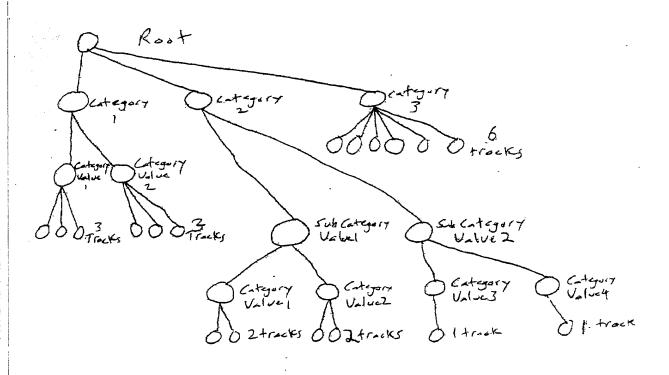


Fig. 1

For example:

Category 1 = Album Name

Category Value 1 = Abbey Road

Category Value 2 = Hits from the 60's

Category 2 = Artist Name

Subcategory Value 1 = British Artists Subcategory Value 2= America- Artists

Category value 1 = The Beatles Category value 2 = Petula Clark Category value 3 = Mamas and the Papas Category Value 4 = NICK Drake

Category 3 = All tracks

V1.0 Albums | 0x01 | BLBN Artists | 0x01 | BCBMBN All Tracks | 0x01 | BN

F13.2

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Album Name Abbey Road - Golden Slumbers - Cheatin Heart - Monday, Monday - Fruit Tree Bratish Artists -Beatles - Golden Slumbers - Something - Sun King - Manas and The Papes - Monday, Monday - Nick Brake All Tracks - Galden Slumbers - Sun King - Cheatin Heart - Monday, Monday - Fruit Tree

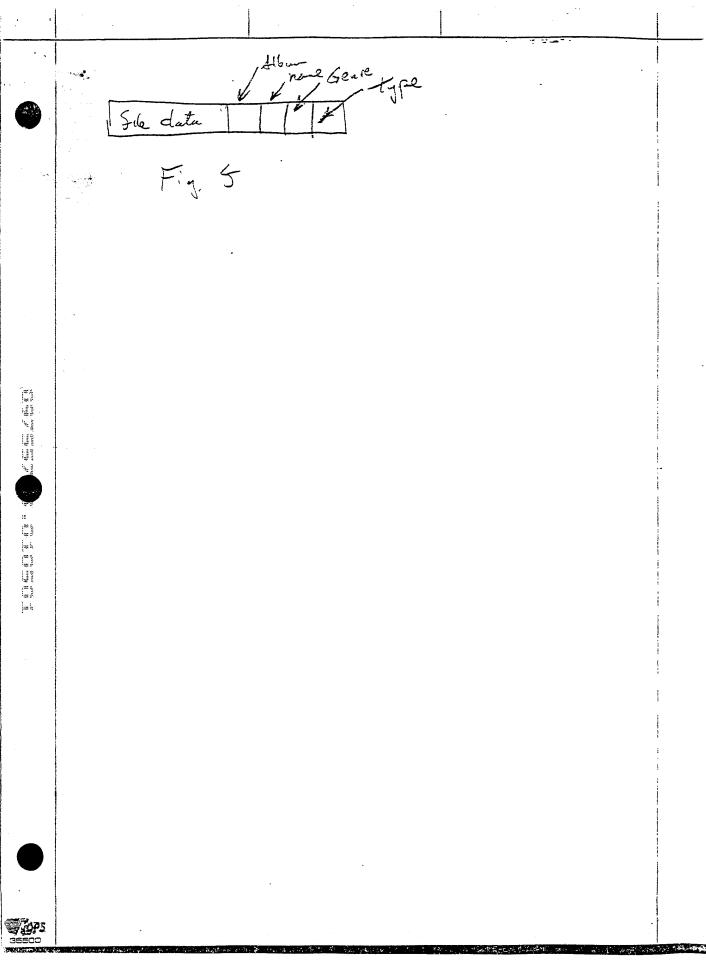
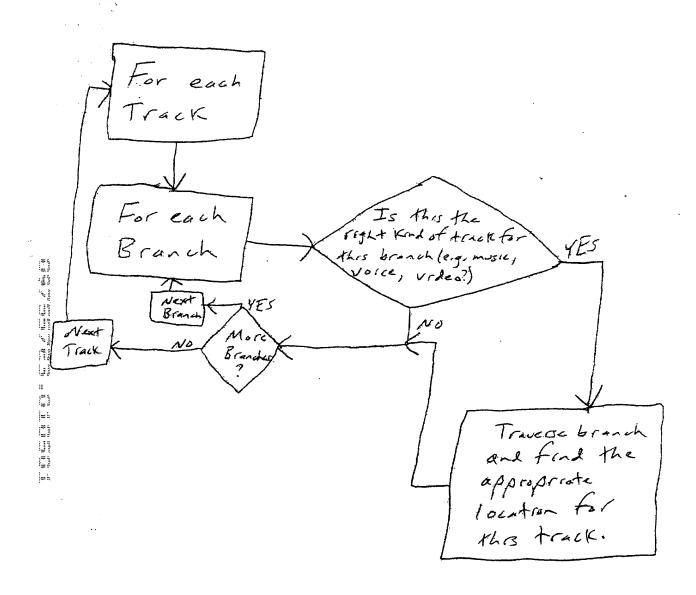


Figure 6



Albums	Full Moon Fever	Free Falling	
		I Won't Back Down	
		Love Is A Long Road	
	Graceland	The Boy In The Bubble	
		Graceland	
	Hotel California	Hotel California	
٠		New Kid In Town	
	Unknown (Created for	Track 1	
٠	items without Album		
	attribute)		
		Stardust	
Artist	Tom Petty	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
	And the second s		
	Eagles	Hotel California	Hotel California
			New Kid In Town
	Paul Simon	Graceland	The Boy In The Bubble
			Graceland
Genre	Rock	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
		Hotel California	Hotel California

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New Kid In Town	The Boy In The Bubble	Graceland
	Graceland	

I. content -	
play list	
Voice tracks	
f- By Name	
()By Source	
Genre	
II- Rock	Fig. 4
190P	
H Jazz	
to By Name 1 By Album	
00000	

Playlists Playlists	My Configuration Walliam Weepo Dance Meddle Slow Hi Meddle Med Med Meddle Slow Lo Meddle Slow Lo Meddle Slow Lo Meddle Slow Lo Meddle Slow Lo	
- The Wall - Meddie - All Songs		Paste from Clipboard Delete .

Fig. 8



Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

inventor (if o	nly one name is listed belo n is claimed and for wh ZATION OF MUSIC BY	w) or an original, first and sich a patent is sought METADATA the specif	elow next to my name; I believe I am the joint inventor (if plural inventors are name on the invention entitled: AUTOMATIC fication of which is attached hereto mended on (if applicable	d below) of the subject C HIERARCHICAL or was filed or	
amendment re Code of Fede foreign applic	eferred to above. I acknow eral Regulations, Section 1. cation(s) for patent or inven	ledge the duty to disclose i 56. I claim foreign priorit tor's certificate listed belo	ntified specification, including the claims nformation which is material to patentability benefits under Title 35, United States Cow and have also identified below any foreignation on which priority is claimed.	as defined in Title 37 de, Section 119 of any	
subject matter the first parage Title 37, Cod	r of each of the claims of the graph of Title 35, United St	is application is not disclos ates Code, Section 112, I a ection 1.56 which occurred	of any United States application(s) listed be sed in the prior United States application in to cknowledge the duty to disclose material in between the filing date of the prior applica-	he manner provided by formation as defined in	
Application No. Date of Filing Status					
	unknown	January 5, 2001	pending		
	unknown	January 5, 2001	pending		

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2
RON GOODMAN	HOWARD N. EGAN
Date	Date

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PTO/SB/05 (11-00) through 10/31/2002. OMB 0651-0032 U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

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Attorne	ey Docket No.	17002-022500	T d
First In	ventor	Ron Goodman	72.
Title	Automatic Hie	rarchical Cateogrization of Music by Metadata	9/755

EL769991701US

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

APPLICATION I	ELEMENTS	ADDRESS TO	Assistant Co	ommissioner for Patents	
See MPEP chapter 600 concerning design pa	atent application contents.	ADDRESS TO	Washington		
1. See Transmittal Form (e.g., Found of Submit an original and a duplicated Applicant claims small entity see 37 CFR 1.27. 3. Specification (preferred arrangement set forth beautiful of the Invention - Cross References to Related Apertained Statement Regarding Fed sponsent Reference to sequence listing, and or a computer program listing aper Background of the Invention Brief Summary of the Invention - Brief Summary of the Drawingsential Description - Claim(s) - Abstract of the Disclosure	e for fee processing) status. [Total Pages 14] lelow) plications ored R & D table, pendix	Computer Prog 8. Nucleotide and/or A (if applicable, all ne a.	ram (Appending Manager) Appending Acid Scassary) Idable Form June Listing CD-R (2 cop Infring identing ide	(CRF) g on: ies); or ty of above copies ICATIONS PARTS or sheet & document(s)) ment Power of	
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a. Newly executed (original or b. Copy from a prior applicatio (for a continuation/divisiona i. DELETION OF INVENT Signed statement attached del named in the prior application, 1.63(d)(2) and 1.33(b). 6. Application Data Sheet. See 37	14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. ☐ Request and Certification under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. 17. ☐ Other: Unsigned Declaration/Power of Attorney, Fee Transmittal Sheet				
18. If a CONTINUING APPLICATION, check or in an Application Data Sheet under 37 (Continuation Divisional Prior application information: Exa For CONTINUATION or DIVISIONAL APPS under Box 5b, is considered a part of the creference. The incorporation can only be reference.	CFR 1.76: Continuation-in-part miner only: The entire disclosure o lisclosure of the accompanyl	(CIP) of prior a Group / f the prior application, from ing continuation or division	application No: Art Unit: which an oat al application	th or declaration is supplied and is hereby incorporated by	
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		Entity	.	Entity		Fee
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Deposit	127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
Account Townsend and Townsend and Crew LLP	139	130	139	130	Non-English specification	
Name S7	147	2,520	147	2,520	For filing a request for reexamination	
Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17	112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
Applicant claims small entity status. See 37 CFR 1.27	113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
2. Payment Enclosed:	115	110	215	55	Extension for reply within first month	
☐ Check ☐ Credit card ☐ Money ☐ Other	116	390	216	195	Extension for reply within second month	
Order	117	890	217	445	Extension for reply within third month	
FEE CALCULATION	118	1,390	218	695	Extension for reply within fourth month	
1. BASIC FILING FEE	128	1,890	228	945	Extension for reply within fifth month	
Large Entity Small Entity Fee Fee Fee Fee Description	119	310	219	155	Notice of Appeal	
Code (\$) Code (\$) Fee Paid	120	310	220	155	Filing a brief in support of an appeal	
101 710 201 355 Utility filing fee 710	121	270	221	135	Request for oral hearing	
106 320 206 160 Design filing fee 107 490 207 245 Plant filing fee	138	1,510	138	1,510	Petition to institute a public use proceeding	
108 710 208 355 Reissue filing fee	140	110	240	55	Petition to revive – unavoidable	
114 150 214 75 Provisional filling fee	141	1,240	241	620	Petition to revive – unintentional	
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Name (Print/Type)	Charles E. Kryege	Registration No. Attorney/Agent)	30,077	Telephone	415-576-0200	
Signature		5 /8	•	Date	1/5/01	
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Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

PATENT APPLICATION

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

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AUTOMATIC HIERARCHICAL CATEGORIZATION OF/MUSIC BY **METADATA**

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is related to Application No. -Selecting and Playing Songs in a Playback Device with a Limited User Interface," Doeket No. 17002-020800); and Application No. Device with Power Savings Storage Access Mode," (Atty-Docket No. 17002-022400), allfiled January 5, 2001, the disclosures of which are incorporated herein by reference.

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BACKGROUND OF THE INVENTION

Today, portable consumer electronic devices are more powerful than ever. For example, small, portable music playback devices can store hundreds, even thousands, of compressed songs and can play back the songs at high quality. With the capacity for so many songs, a playback device can store many songs from different albums, artists, styles of music, etc.

Music jukeboxes implemented in software executed by a digital computer and portable MP3 and CD players both provide facilities for forming playlists. For example, the OOZIC player, distributed by the assignee of the present application, runs on a host PC and has a playlist feature that allows selection of tracks from the PC's hard disk to be included in the playlist.

As storage capacity increases and songs are compressed to shorter file lengths the number of songs that can be stored increases rapidly. Major problems facing the consumer are organizing and accessing the tracks.

Typically, portable devices have a user interface including a small screen and buttons. Using such a compact/user interface to navigate and select among hundreds of songs is inefficient and often frustrating. The display screen can only show a few song titles at one time, and the limited controls make it difficult for a user to arbitrarily select, or move among, the songs.

The creation of playlists is one technique to organize the playing of songs. A set of songs can be included in a playlist which is given a name and stored. When the playlist is accessed, the set of/songs can be played utilizing various formats such as sequential play or shuffle.

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However, the creation of playlists itself becomes problematic as the number of songs increases, since the user often arbitrarily selects songs from a large number of tracks to form a playlist. This selection mechanism: can be fairly tedious; does not necessarily produce playlists that are of interest to the user over the course of time; may not remain up-to-date if new songs are added that logically fit into a previously created playlist (e.g. "Favorites by Band X" might become out of date if a new favorite by Band X is added after the playlist was created); and leads to "lost" songs that are not members of any playlist.

Accordingly, improved techniques for organizing and grouping tracks useful in a portable music player are needed.

SUMMARY OF THE INVENTION

According to one aspect of the present invention, a technique is provided for organizing tracks on a portable music player by automatically filing tracks in a hierarchical order based on attributes of the tracks.

According to another aspect of the invention, metadata is associated with each track that is used to automatically define the track's appropriate place in the hierarchy.

According to another aspect of the invention, the hierarchy is displayed on the portable music player so that a user can traverse the organizational hierarchy to find individual tracks or find playlists composed of logical groups of tracks.

According to another aspect of the invention, the hierarchy is derived by using metadata associated with the audio content that was obtained through any source of metadata (e.g. CDDB metadata, id3v2 metadata, other obtainable metadata) and subsequently stored with or alongside the file that stores the track.

According to another aspect of the invention, a file is formatted so that an unaltered track is stored as file data and information about the track is stored in file attribute files.

Other features and advantages of the invention will be apparent in view of the following detailed description and appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic diagram of a tree structure for hierarchical filing of tracks;





Fig. 2 is a definition file that specifies the hierarchy depicted in Fig. 1;

Fig. 3 is a user's view of the hierarchy;

Fig. 4 is a schematic diagram of a user interface displaying the hierarchical category structure;

Fig. 5 is a diagram of a file format for storing filed data and file attributes; Fig. 6 is a flow chart depicting steps for filing tracks according to the

hierarchical tree structure;

Fig. 7 depicts a tree resulting from searching the tracks; and

Fig. 8 depicts a format for a user interface.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of the invention will now be described in the context of a portable personal player that plays audio files stored in memory. The files may be in MP3, way, or other digital formats.

In the presently described embodiment, users are able to see the tracks on their player in some organized fashion other than as a single list of tracks. As will be described in more detail below, in one embodiment tracks are sorted utilizing a tree structure having branches labeled according to types of metadata associated with the tracks

For example, a track recorded as "Golden Slumbers" by the Beatles that appears on their album "Hey Jude" might appear as a track under the album "Abbey Road" as well as a track under the list of tracks by the Beatles. It might appear as a track under the genre "Pop Rock" as well as "Songs from the 60's." Furthermore, the organization can have more complex hierarchies. For example, the category of "Pop Rock" might contain subcategories "British Musicians," "American Musicians" and "Other Musicians". In all cases, the track is automatically filed into all appropriate locations without requiring user interaction.

In the currently defined embodiment, a tree structure is defined by a file having the following structure.

The first line of a TreeDef.inf file contains a version number:

V1.0

Each subsequent line (at least in v1.0) contains lines of the following format: CATEGORY_NAME|TRACK_TYPE_MASK|CATEGORY_STRUCTURE

CATEGORY_NAMEs are the top-level names of the branch under which tracks are sorted. They include things like "Album," "Artist," "Voice Tracks," "All Tracks," etc.

TRACK_TYPE_MASKs tell which types of tracks are to be filed under this particular branch. The actual value is a hexadecimal numerical value (in '0x' format, e.g. 0x01) generated by ORing the following flags together as appropriate:

So, for example, the "Album" branch has a TRACK_TYPE_MASK of kTTSong, because only songs are filed under that branch, but the "All Tracks" branch has a TRACK_TYPE_MASK of (kTTSong | kTTVoice | kTTBook).

Other elements might be added to tTrackType (e.g. kTTVideo) as appropriate.

CATEGORY_STRUCTUREs tell how to file the songs based on their metadata information. The CATEGORY_STRUCTURE is a string of characters that tell, from left to right, the order of hierarchy. The characters come from the following enum

25 constants:

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enum tFileTag
{

kFTNone='@',

kFTTrackType='T',

kFTTitle='N',

kFTAudioFile='F',

kFTArtist='M',

kFTAlbum='L',
```

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kFTGenre='G',
kFTSource='S',
kFTYear='Y',
kFTArtistCountry='C'

5 };

Thus, a CATEGORY_STRUCTURE of LN tells to create a subcategory that is a list of Albums, each of which contains a list of Tracks.

In total, a line like:

10 Album|0x01|LN

Says to create a branch called "Album" which contains tracks of type kTTSong organized first by album name, and then by track name.

The following is an example of a tree definition file similar (though not identical) to the hierarchy presented in the Nomad Jukebox product (the 'B' before each FileTag was used to identify that these are basic tags so that we wouldn't run out of letters in the alphabet as we included more complex metadata – thus each group of two letters represents a level in the hierarchy):

V1.0
Album|0x01|BLBN
Artist|0x01|BMBN
Genre|0x01|BGBN
Voice Tracks|0x02|BSBGBN
Playlists|0x10|BN

Macros|0x08|BN
All Tracks|0x07|BN

Fig. 1 depicts a hypothetical organization hierarchy. The tree shows how tracks might be listed (as leaves in the tree) after having been organized. Example values for nodes in the tree are shown as well. The same track may appear more than once as a leaf in the tree, as described above, if it fits into multiple categories (e.g. a song that appears on the Abbey Road branch would also appear in the Beatles branch). In the example shown, the first branch contains tracks organized by album. As shown in the example, this music collection contains three tracks from "Abbey Road" and three tracks from "Hits from the

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60's". The second branch contains tracks organized by artist, and sub organized by where the artist is from. Thus, a user browsing would first select the "Artists" branch and then choose between "British Artists" and "American Artists". Finally, they would select the particular artist. In the third branch, all tracks are shown.

The tree definition file that would specify the hierarchy shown in Figure 1 is shown in Figure 2.

The first line identifies the version of the tree definition file.

The second line defines the "Albums" branch. The first part of the line, "Albums" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BLBN," defines that the branch lists first the names of all albums (BL) and then tracks on those albums (BN).

The third line defines the "Artists" branch. The first part of the line "Artists" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BCBMBN," defines that the branch lists first the names of all countries where artists in this collection come from (BC) and under those items, the artists' names (BM), and then tracks by those artists (BN).

Fig. 3 shows what a user's view of this hierarchy might be if he/she were shown a fully expanded view of the 6-song tree. Notice that each song appears three times, once in each branch.

In consumer products the tree define file is not edited directly but through a user interface, one example of which is depicted in Fig. 4. An example of a user interface for viewing songs by category and editing the tree structure is depicted in Fig. 4.

An embodiment of the invention is utilized in the Nomad® Jukebox, manufactured by the assignee of the present invention, and described more fully in the copending application, filed on the same date as the present application, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Attny. Docket No. 17002-020800).

In a preferred embodiment, metadata is associated with each track and includes such information as title, genre, artist name, type, etc. In the preferred embodiment, software stored in a portable player and executed by the onboard processor automatically files each track in the correct category utilizing the associated metadata and the tree define file. The program code can be stored in any computer readable medium including magnetic storage, CD ROM, optical media, or digital data encoded on an electromagnetic signal.

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Thus, the user is automatically provided with a powerful and flexible tool for organizing and categorizing the tracks stored on the portable player.

If the tracks are formatted in MP3 format the metadata can be stored in ID3 tags included in the MP3 file. In one embodiment of the invention, the tracks are stored in alternate file format including file data and file attributes. The file data is the music track itself and the file attributes part of the file includes fields of arbitrary size which are used to store metadata characterizing the track stored as the file data. Again this metadata includes information about the track such as title, genre, artist name, type, etc.

There are several advantages to using the alternate file format. Metadata of types not easily included in an ID3 tag can be utilized. Further, the original track format is not changed, so that error correction data such as checksums are valid. Finally, any file format can be used (e.g. WAV, WMA, etc.) because the metadata is stored separately, and thus audio formats that have limited support for metadata can still be stored on the portable player in native format without transcoding. The formatted files are formed by software stored in the portable music player and executed by an on-board processor.

The metadata for each track is utilized to file each track, using the categories defined in the hierarchical structure as described above, without any input from the user.

Fig. 5 is a schematic diagram of the alternative file format including file data in the form of an MP3 track, and metadata fields for holding data indicating the name of the album the track is from, the name of the song, the genre of the song, and the type of track.

A particular embodiment of a file format will now be described. All tracks are created with some set of attributes as shown below:

Definition of TrackInfo Data Field

		T		
Field	Offset	Size	Description	
Attribute Count	0	2	The number of attribute follow for the track	
Attr 1 type	2	2	Binary = 0, ASCII = 1	
Attr 1 name len	4	2	Length of attribute name string	
Atti i fiame ich	<u> </u>		Length of attroute name string	
Attr1 data len	6	4	Length of attribute data	
Attr1 Name	10	N	Attribute name string	
Attr 1 Data	10+N	M	Attribute data	

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Attr N type		 	
Attr 1 name len		 	
Attr1 data len	_		
Attr1 Name		 	
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Required Attributes

	· · · · · · · · · · · · · · · · · · ·	
Attribute Name	Value(s)	Remarks
TITLE	ASCII string	Required By Jukebox
CODEC	"MP3", "WMA", "WAV"	Required By Jukebox
TRACK ID	DWORD	Set By Jukebox
ALBUM	ASCII string	Optional
ARTIST	ASCII string	Optional
GENRE	ASCII string	Optional
LENGTH	In seconds	Optional
TRACK SIZE	In bytes	Optional
TRACK NUM	1-n (track within album)	Optional

These attributes can be subsequently changeable via a host application,

5 running on a personal computer connected to the portable music player.

Fig. 6 shows a flow chart of an embodiment the process used to build the hierarchical database of tracks. It starts by iterating through each track, and, for each track, iterating through each branch to find if the track belongs on the branch, and, if so, where. In this case, the term track could refer to any content, e.g. a music track, a spoken word track, or even a video track.

Also, the hierarchical catalog of tracks can be used to form playlists in a structured manner. For example, if a user wants to hear Jazz and Blues the entire subcategories can be selected to form one playlist.

An alternative hierarchical catalog generation technique will now be

described. In this alternative embodiment, at system startup and as tracks are added or
changed, the hierarchy is generated as an in-memory tree structure. Each track is added to
the tree using the categories ALBUM, ARTIST and GENRE.

The following example shows the algorithm for adding a track. For clarity, only the attributes used by the tree are shown.

TITLE	"Free Falling"
ALBUM	"Full Moon Fever"
ARTIST	"Tom Petty"
GENRE	"Rock"
TRACK NUM	1

The following function is executed to build the in-memory memory tree.

Build Tree ()

15 For each track,

10

The real of their lime of their to the

20

25

Add Track To Category(Album, Track)

Add Track To Category(Artist, Track)

Add Track To Category(Genre, Track)

End of Build Tree

Fig. 7 depicts a tree which could result from implementing Build Tree() function. Note that "Stardust" does not have any entries for Album or Artist. The host software running on a computer connected to the portable music player could be utilized to add missing attributes to the "Stardust" track and, optionally, edit the title attribute. The Build Tree() function would then reinsert this track in the correct location in the tree.

Fig. 8 is an embodiment of a user interface according to another embodiment of the invention. In this example the root node is labeled "My Configuration" and the Playlist category has been selected and the Playlist subcategory "Meddle" has been selected.

5



Note that the types of Metadata, in this example, Track Name, Artist, Album, Tempo and Dance, are listed across the top of the screen, and the attribute values for each track are listed in a row across the screen. Various control buttons are displayed to the right of configuration window that facilitate quickly invoking selected processing on a selected track.

The invention has now been described with reference to the preferred embodiments. Alternatives and substitutions will now be apparent to persons of skill in the art.

WHAT IS CLAIMED IS:

1.04	1. A method, performed by a processor in a portable digital music player,
2	for filing audio tracks stored on a computer readable media, with each audio track having
3	metadata associated therewith including category value data for naming attributes of the track
4	and type data indicating the type of track, said method comprising the acts of:
5	reading a definition file that defines an ordered hierarchical tree structure, with
6	the file including category names for naming the branch under which tracks are sorted, track
7	type information specifying which type of tracks are to be sorted under the branch, and
8	structure information defining how to file tracks based on associated metadata;
9	for each track, iteratively determining, base on metadata describing the track,
10	if the track belongs in the branch, and, for each branch in which the track belongs, traversing
11	the branch to determine the appropriate location to file the track.
1	2. The method of claim 1, where said act of searching further comprises
2	the acts of:
3	utilizing track type information to file only tracks of a specified type under a
4	particular branch.
1	3. The method of claim 1 further comprising the acts of:
2	for each branch, utilizing category structure information to file tracks in a
3	specified attribute order.
1	4. The method of claim 1, where said portable digital music player
2	includes a display screen and a user interface for interacting with the display, further
3	comprising the acts of:
4	displaying the categories and subcategories on the display in a hierarchical
5	order;
6	displaying all names of tracks associated with a category or sub-category
7	when a user utilizes the interface to select a category or sub-category;

8	utilizing the pointer to access and play a track when a user selects a track
9	name through the user interface. and
10	utilizing the pointer to access and play a collection of tracks within a category
11	or subcategory when a user selects a category or subcategory through the user interface.
1	A method, implemented by a processor in a portable digital music
2	player, for associating metadata with audio tracks comprising the acts of:
3	opening a formatted file for each track comprising a file data portion and a file
4	attributes portion, with the file attributes portion including a plurality of fields corresponding
5	to category types and tile types;
6	storing an unmodified audio track in the file data portion of the formatted file;
7	and
8	storing category type and file type information about the unmodified track in
9	corresponding fields.
71.	A weath of weathermored by a management in a mortable digital mayor a playor
	6. A method, performed by a processor in a portable digital music player
2	for filing audio tracks, stored on a computer readable media, under categories in an in-
3	memory tree structure, with each audio track having metadata associated therewith including
4	category name data for naming, said method comprising the acts of:
5	upon startup or when a track is added or changed, searching the metadata of
6	each track; and
7	for each track, automatically filing the track by category name under each
8	selected category to form a hierarchical track filing scheme.
1	7. The method of claim 6 further comprising the act of:
2	selecting the categories to be the Album including the track, the title of the
3	track, and the name of the artist that recorded the track.

1	8. The method of claim 6, where said portable digital music player
2	includes a display screen and a user interface for interacting with the display, further
3	comprising the acts of:
4	displaying the categories on the display in a hierarchical order;
5	displaying all names of tracks associated with a category when a user utilizes
6	the interface to select a category;
7	accessing and playing a track when a user selects a track name through the
8	user interface. and
9	accessing and playing a collection of tracks within a category when a user
10	selects a category through the user interface.
1	9. A computer program product comprising:
2	a computer readable medium having program code embodied therein for filing
	1

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

audio tracks stored on a computer readable media, with each audio track having metadata

data indicating the type of track, said program code comprising:

associated therewith including category value data for naming attributes of the track and type

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

10. A computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each audio track having metadata associated therewith including category name data for naming, said program code comprising:

6	program code, executed by a processor, upon startup or when a track is added
7	or changed, for searching the metadata of each track; and
8	program code, executed by a processor, for each track, for automatically filing
9	the track by category name under each selected category to form a hierarchical track filing
10	scheme.
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Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

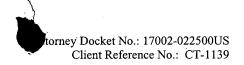
AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

ABSTRACT OF THE DISCLOSURE

A method, performed by software executing on the processor of a portable music playback device, that automatically files tracks according to hierarchical structure of categories to organize tracks in a logical order. A user interface is utilized to change the hierarchy, view track names, and select tracks for playback or other operations.

SF 1174925 v2





DECLARATION AND POWER OF ATTORNEY

ch is claimed and for w	hich a patent is sought on the	invention entitled: AUTOMATI	C HIERARCHICAL
as Application No.	and was amended	l on (if applicabl	e).
referred to above. I acknown deral Regulations, Section 1 lication(s) for patent or inve	vledge the duty to disclose informat .56. I claim foreign priority benef ntor's certificate listed below and h	ion which is material to patentabilit its under Title 35, United States Co ave also identified below any foreig	y as defined in Title 37, ode, Section 119 of any
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OF ATTORNEY: As a na and transact all business in t	med inventor, I hereby appoint the Patent and Trademark Office con Charles E. Krueger, Reg. N Paul C. Haughey, Reg. N	ne following attorney(s) and/or ago nnected therewith.	ent(s) to prosecute this
	as Application No	conly one name is listed below) or an original, first and joint in ich is claimed and for which a patent is sought on the RIZATION OF MUSIC BY METADATA the specification as Application No and was amended itewed and understand the contents of the above identified a referred to above. I acknowledge the duty to disclose informat deral Regulations, Section 1.56. I claim foreign priority benefication(s) for patent or inventor's certificate listed below and he is certificate having a filing date before that of the application or benefit under Title 35, United States Code, Section 120 of any leter of each of the claims of this application is not disclosed in the agraph of Title 35, United States Code, Section 112, I acknowledge of Federal Regulations, Section 1.56 which occurred between ational filing date of this application: Application No.	Application No. Date of Filing Status unknown January 5, 2001 pending unknown January 5, 2001 pending

Charles E. Krueger, Reg. No. 30,077 Paul C. Haughey, Reg. No. 31,836 Charles J. Kulas, Reg. No. 35,809 Daniel D. Tagliaferri, Reg. No. 43,178

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Attorney Docket No. 17822-022500 Client Reference No.: CT-1139

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2
RON GOODMAN	HOWARD N. EGAN
Date	Date

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BIBDATASHEET

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CONFIRMATION NO. 3728

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PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2000

Application or Docket Number

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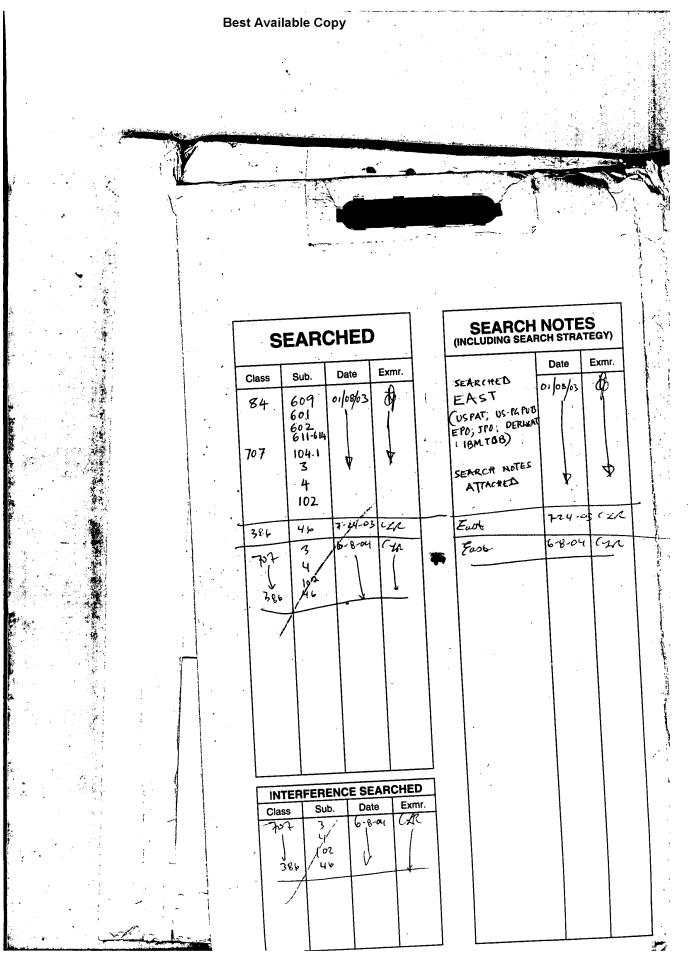
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INDEX OF CLAIMS

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If more than 150 claims or 10 actions staple additional sheet here

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United States Patent and Trademark Office

COMMISSIONER FOR PATENTS UNITED STATES PATENT AND TRADEMARK OFFICE

WASHINGTON, D.C. 20231 www.uspto.gov

APPLICATION NUMBER

FILING/RECEIPT DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NUMBER

09/755,723

01/05/2001

Ron Goodman

17002-022500

20350 TOWNSEND AND TOWNSEND AND CREW TWO EMBARCADERO CENTER **EIGHTH FLOOR** SAN FRANCISCO, CA 94111-3834

CONFIRMATION NO. 3728 FORMALITIES LETTER OC000000005783175

Date Mailed: 02/21/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 130.

The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Substitute drawings in compliance with 37 CFR 1.84 because:
 - drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch);

A copy of this notice MUST be returned with the reply.

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 3 - OFFICE COPY

#CR

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Attorney Docket No.: 017002-022500US Client Reference No.: CT-1139

Assistant Commissioner for Patents Washington, D.C. 20231

Washington, D.C. 20231

TOWNSEND and TOWNSEND and CREW LLP

By: VI SUPRE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

GOODMAN et al.

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Art Unit: 2185

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced application, please enter the following amendments and remarks.

IN THE SPECIFICATION:

Please substitute the following for the paragraph apearing on page 1 under the CROSS-REFERENCES TO RELATED APPLICATIONS heading. A marked up version of the paragraph is appended to this amendment.

--This application is related to Application No. 09/755,629, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Atty. Docket No. 17002-020800); and Application No. 09/755,367, entitled "Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No. 17002-022400), both filed January 5, 2001, the disclosures of which are incorporated herein by reference.--

5

GOODMAN et al.

Application No.: 09/755,723

Page 2

PATENT

REMARKS

By this amendment information regarding related applications that was not available at the time of filing has been added. Entrance of the amendment is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Charles E. Krueger Reg. No. 30,077

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834 Tel: (415) 576-02000

Fax: (415) 576-0300 CEK:deb SF 1210990 v1 5

Marked Up Version of Amended Paragraph 09/755,723

This application is related to Application No. [_/,] <u>09/755,629</u> , entitled
"System for Selecting and Playing Songs in a Playback Device with a Limited User Interface,"
(Atty. Docket No. 17002-020800); and Application No. [_/,] <u>09/755,367</u> , entitled
"Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No.
17002-022400), [all] both filed January 5, 2001, the disclosures of which are incorporated herein
hy reference.



Inventor Information

Inventor One Given Name::

RON

Family Name::

GOODMAN

Name Suffix::
Postal Address Line One::

226 Jeter Street

City::

Santa Cruz

State or Province:: Postal or Zip Code::

CA

Citizenship Country::

95060 US

Inventor Two Given Name::

HOWARD

Family Name::

EGAN

Name Suffix::

219 Elinor Street

Postal Address Line One::

Capitola

City::

CA

State or Province:: Postal or Zip Code::

95010

Citizenship Country::

US

Correspondence Information

Correspondence Customer Number::

20350

Application Information

Title Line One::

AUTOMATIC HIERARCHICAL

Title Line Two::

CATEGORIZATION OF

Title Line Three::

MUSIC BY METADATA

Total Drawing Sheets:: Formal Drawings?::

6 Yes

Application Type::

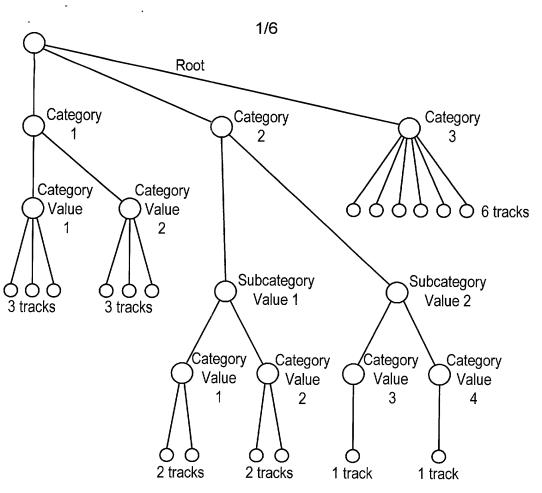
Utility

Docket Number::

017002022500

Secrecy Order in Patent Appl.?::

No



17002-225

For example:

Category 1 = Album Name

Category Value 1 = Abbey Road

Category Value 2 = Hits from the 60's

Category 2 = Artist Name

Subcategory Value 1 = British Artists

Subcategory Value 2 = American Artists

Category Value 1 = The Beatles

Category Value 2 = Petula Clark

Category Value 3 = Mamas and the Papas

Category Value 4 = Nick Drake

Category 3 = All tracks

FIG. 1.

V1.0 Albums|0x01|BLBN Artists|0x01|BCBMBN All Tracks|0x01|BN

FIG. 2.

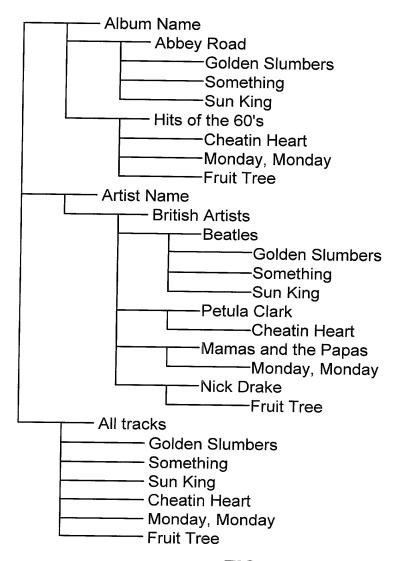
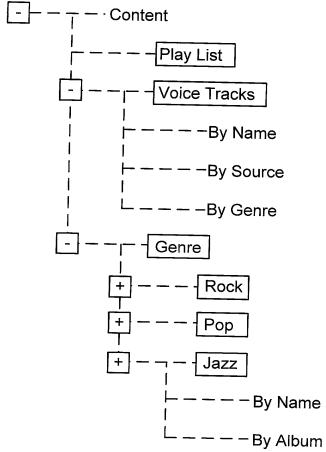


FIG. 3.



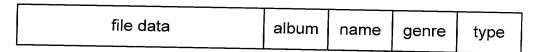


FIG. 5.

FIG. 4.

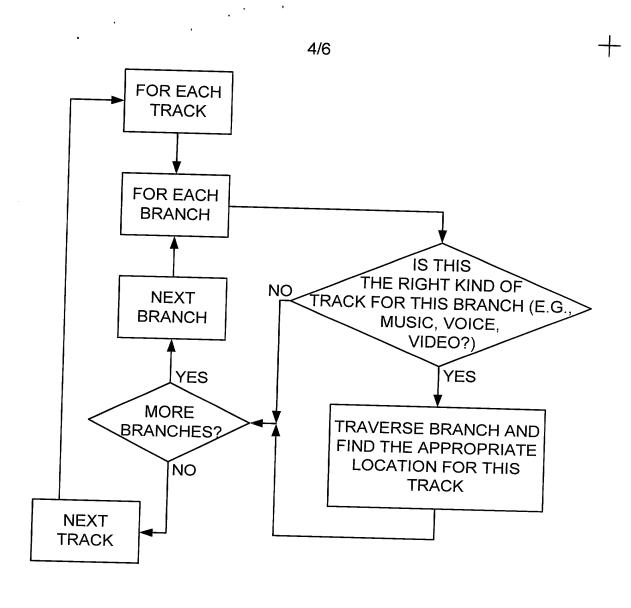
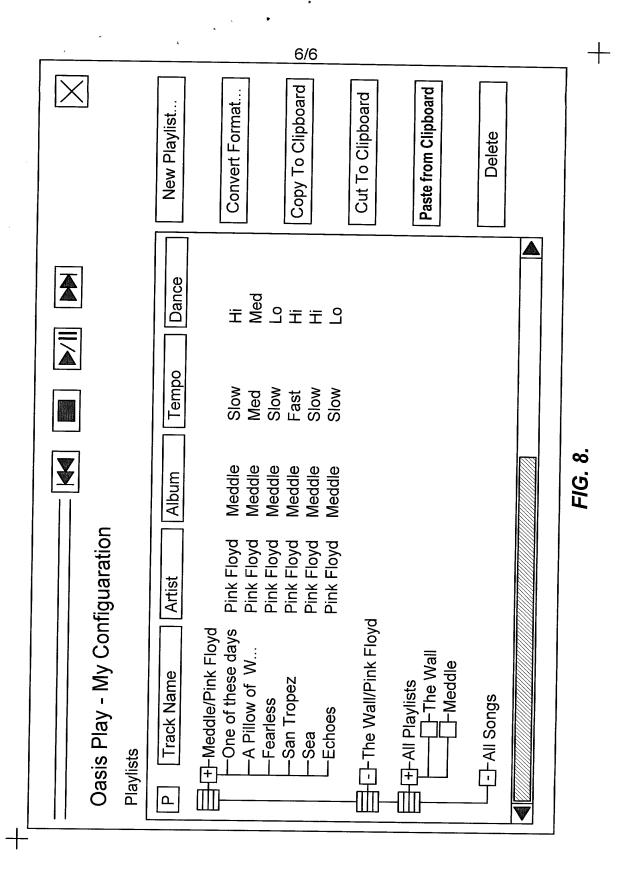


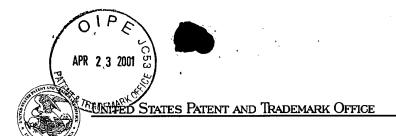
FIG. 6.

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Albums	Full Moon Fever	Free Falling	
		I Won't Back Down	
		Love Is A Long Road	
	Graceland	The Boy In The Bubble	
		Graceland	
	TOTAL CALIFORNIA	New Kid In Town	
	sme	Track 1	
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		:	
	Tom Petty	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
	Eagles	Hotel California	Hotel California
			New Kid In Town
	ici	-	
	Paul Simon	Graceland	The Boy In The Bubble Graceland
			5
	Rock	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
		Hotel California	Hotel California
			New Kid In Town
		Graceland	The Boy In The Bubble
			Graceland

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Page 1 of 2

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ATTORNEY DOCKET NUMBER

09/755,723

01/05/2001

Ron Goodman

17002-022500

20350 TOWNSEND AND TOWNSEND AND CREW TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 CONFIRMATION NO. 3728
FORMALITIES LETTER
OC000000005783175

Date Mailed: 02/21/2001

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04/25/2001 MKOROHA 00000042 20143V Dottom-margin of at least 1.0 cm. (3/8 inch);

01 FC:105

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A copy of this notice <u>MUST</u> be returned with the reply.



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Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139



DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA the specification of which is attached hereto or was filed on as Application No and was amended on (if applicable).
I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56. I claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

I claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application No.	Date of Filing	Status
unknown	January 5, 2001	pending
unknown	January 5, 2001	pending

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Charles E. Krueger, Reg. No. 30,077 Paul C. Haughey, Reg. No. 31,836 Charles J. Kulas, Reg. No. 35,809 Daniel D. Tagliaferri, Reg. No. 43,178

Send Correspondence to:

Charles E. Krueger

TOWNSEND and TOWNSEND and CREW LLP

Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834

Direct Telephone Calls to:
(Name, Reg. No., Telephone No.)
Name: Charles E. Krueger
Reg. No.: 30,077
Telephone: 415-576-0200

Full Name of	Last Name:	First Name:	Middle Name or Initial:	
Inventor 1:	GOODMAN	RON		
Residence &	City:	State/Foreign Country:	Country of Citizenship:	
Citizenship:	Santa Cruz	California	United States	
Post Office	Post Office Address:	City:	State/Country: Pos	stal Code:
Address:	226 Jeter Street	Santa Cruz	California 95	060



Attor

Attorney Docket No. 17822-022500 Client Reference No.: CT-1139

Full Name of Inventor 2:	Last Name: EGAN	First Name: HOWARD	Middle Name or I	nitial:
Residence & Citizenship:	City: Capitola	State/Foreign Country: California	Country of Citizenship: United States	
Post Office Address:	Post Office Address: 219 Elinor Street	City: Capitola	State/Country: California	Postal Code: 95010

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2	
Ron Booker	All E	
RÓN GOODMAN	HOWARD N. EGAN	
Date 3/14/2001	Date 3-22-200/	

SF 1175410 v1

Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

ASSIGNMENT OF PATENT APPLICATION

WHEREAS, RON GOODMAN, of 226 Jeter Street, Santa Cruz, CA 95060; HOWARD N. EGAN, of 219 Elinor Street, Capitola, CA 95010; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF

MUSIC BY METADATA

Date(s) of Execution:

Filing Date:

January 5, 2001

Application No.:

09/755,723; and

WHEREAS, CREATIVE TECHNOLOGY LTD., located at 31 International Business Park, Creative Resource, Singapore, 609921, hereinafter referred to as "ASSIGNEE," is desirous of acquiring ASSIGNORS' interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the said Assignees, and Assignees' successors and assigns, all their right, title and interest in and to the said invention and application, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignees as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Assignment Attorney Docket No.: 17002-022500US Page 2 Dated: 3/14/2001 RON GOODMAN
STATE OF CALIFORNIA)) ss. COUNTY OF)
On March 14, 2001, before me, Jacqueline W. Battano, personally appeared RÓN GOODMAN, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her-signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.
JACQUELINE W. BAZZANO Commission # 1132234 Notary Public — Caffornia Santa Cruz County My Comm. Expires Apr 2, 2001 NOTARY PUBLIC
My Commission Expires: $\frac{4/2/2001}{}$
Dated: 3 - 2 2 - 2001 HOWARD N. EGAN
STATE OF CALIFORNIA)
COUNTY OF) ss.
on March 22, 3001 , before me, Jaqueline W Bazzano (Notony Public) personally appeared HOWARD N. EGAN , personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.
JACQUELINE W. BAZZANO Commission # 1132234 Notary Public — California Santa Cruz County My Comm. Expires Apr 2, 2001 NO VARY PUBLIC
My Commission Expires: $\frac{4/2/200/}{}$

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. STATEMENT UNDER 37 CFR 3.73(b) Applicant/Patent Owner: Creative Technology LTD. Application No./Patent No.: 09/755,723 Filed/issue Date: January 5, 2001 Entitled: Automatic Hierarchical Categorization of Music by Metadata Creative Technology LTD. a Corporation (Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.) states that it is: the assignee of the entire right, title, and interest; or an assignee of an undivided part interest in the patent application/patent identified above by virtue of either: A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached. OR B.

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The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

recorded in the records of the USPTO. See MPEP 302.8]

Ng Keh Long

Typed or printed name

Chief Financial Officer

Title

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SF 1197824 v1



tor Information

Inventor One Given Name::

Family Name:: Name Suffix::

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City::

Santa Cruz

State or Province:: Postal or Zip Code:: CA 95060

Citizenship Country::

US

RON

Inventor Two Given Name::

HOWARD

Family Name::

EGAN

Name Suffix::

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Capitola

City::

CA

State or Province:: Postal or Zip Code::

95010

Citizenship Country::

US

Correspondence Information

Correspondence Customer Number::

20350

Application Information

Title Line One::

AUTOMATIC HIERARCHICAL

Title Line Two:: Title Line Three:: **CATEGORIZATION OF** MUSIC BY METADATA

Total Drawing Sheets: Formal Drawings?::

Yes

Application Type::

Utility

Docket Number::

017002022500

Secrecy Order in Patent Appl.?::

No

. •. ' •	1	I hereby certify that this correspond, being deposited with the United
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Q \	3	Washington, D.C. 20231
0	23	on ¥ / / 8 - /
Ĭ /	4PR	TOWNSEND and TOWNSEND and CREW LLP
	PATE	VOR. OCA

Attorney Docket No.: 017002-022500US
Client Reference No.: CT-1139

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

GOODMAN et al.

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Art Unit: 2185

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced application, please enter the following amendments and remarks.

IN THE SPECIFICATION:

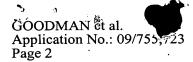
Please substitute the following for the paragraph apearing on page 1 under the CROSS-REFERENCES TO RELATED APPLICATIONS heading. A marked up version of the paragraph is appended to this amendment.

AI

(AL, 04)

Selecting and Playing Songs in a Playback Device with a Limited "Superior Control of Con

X





REMARKS

By this amendment information regarding related applications that was not available at the time of filing has been added. Entrance of the amendment is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Charles E. Kruege Reg. No. 30,077

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834

Tel: (415) 576-0200 Fax: (415) 576-0300

CEK:deb SF 1210990 v1 5

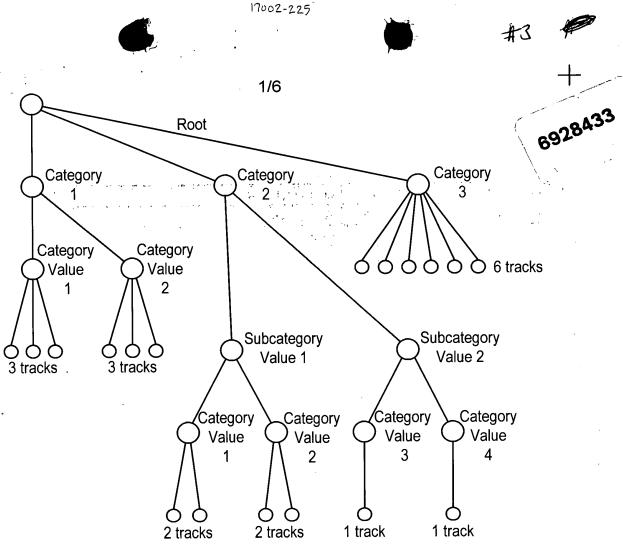




Marked Up Version of Amended Paragraph 09/755,723

This application is related to Application No. [/,] 09/755,629, entitled
"System for Selecting and Playing Songs in a Playback Device with a Limited User Interface,"
(Atty. Docket No. 17002-020800); and Application No. [_/,] 09/755,367, entitled
"Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No.
17002-022400), [all] both filed January 5, 2001, the disclosures of which are incorporated herein
by reference.

K



For example:

Category 1 = Album Name

Category Value 1 = Abbey Road

Category Value 2 = Hits from the 60's

Category 2 = Artist Name

Subcategory Value 1 = British Artists

Subcategory Value 2 = American Artists

Category Value 1 = The Beatles

Category Value 2 = Petula Clark

Category Value 3 = Mamas and the Papas

Category Value 4 = Nick Drake

Category 3 = All tracks

FIG. 1.



V1.0 Albums|0x01|BLBN Artists|0x01|BCBMBN All Tracks|0x01|BN

FIG. 2.

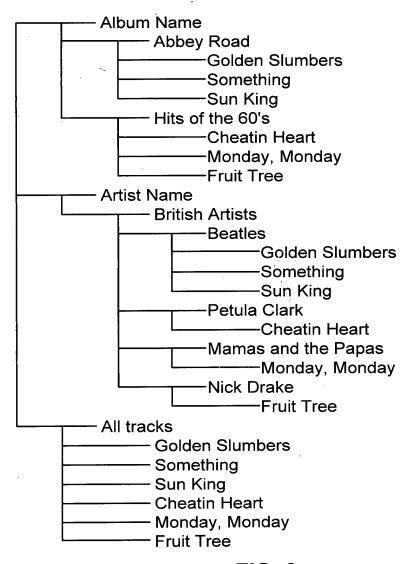
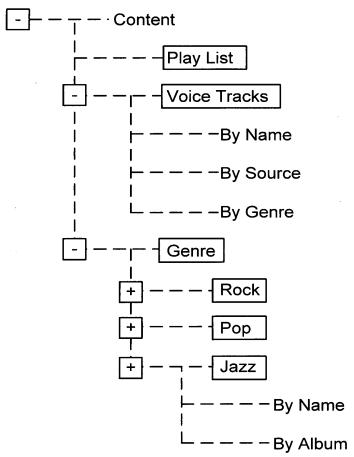


FIG. 3.



file data album name genre type

FIG. 5.

FIG. 4.

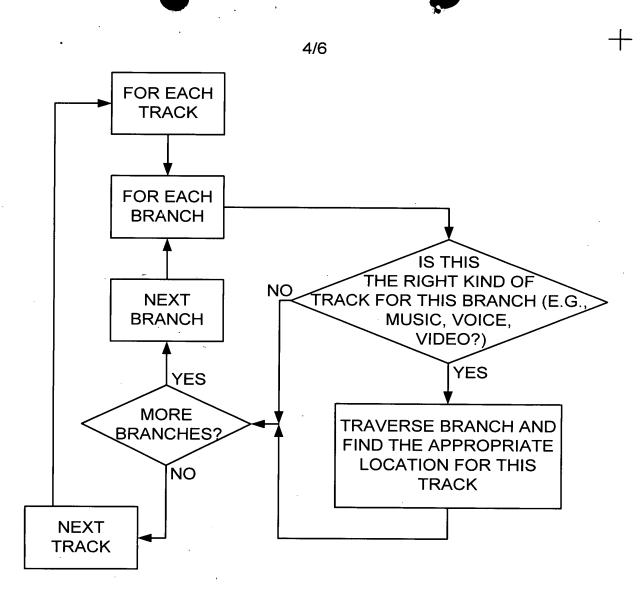
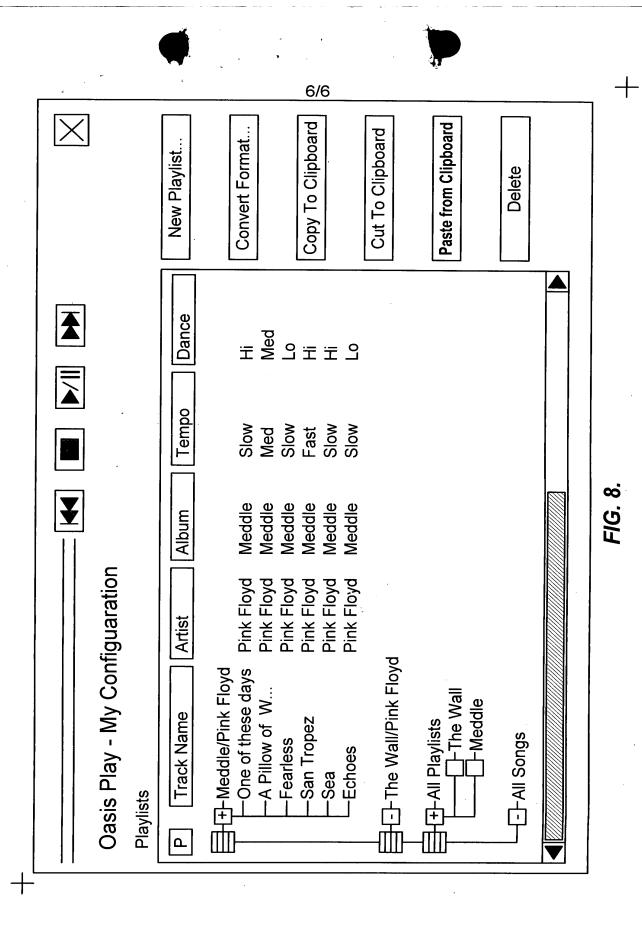


FIG. 6.

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	SES	st dailig	
	Swa	Graceland Hotel California New Kid In Town Track 1	
	sms	Hotel California New Kid In Town Track 1	
	sms	Hotel California New Kid In Town Track 1 Stardust	
	sms	New Kid In Town Track 1 Stardust	
	Sms	Track 1 Stardust	
	sme	Track 1 Stardust	
		Stardust	
	-	Stardust	
	Fom Petty	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
Eac	Eagles	Hotel California	Hotel California
			New Kid In Town
Paul	Simon	Graceland	The Boy in The Bubble
			Graceland
Genre		Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
		(
		Hotel California	Hotel California
			New Kid In Town
		Graceland	The Boy In The Bubble
			Graceland

FIG. 7



SONY Exhibit 1003 - Page 84

Please type a plus sign (+) inside this box -> +

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		'	Applic	cation Number	09/755,723
	ISMITTAL	j	Filing	Date	January 5, 2001
F	ORM		First I	Named Inventor	GOODMAN, RON, et. al.
(to be used for all cor	теspondence after ir	nitial filing)	Group	Art Unit	2185
			Exami	iner Name	·
Total Number of Pages	s in This Submission	<u> </u>	Attorn	ey Docket Number	017002022500
		ENCL	OSURES	(check all that apply)	
Fee Transmittal F	orm	Assigni (for an A	ment Pap		After Allowance Communication to Group
Fee Attached		☑ Drawin	ıg(s)		Appeal Communication to Board of Appeals and Interferences
Amendment / Response		Licensi	ing-relate	ed Papers	Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
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Affidavits/declaration(s)		_	n to Convional App		Status Letter
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☐ Information Disclo	osure Statement	CD, N	umber of	CD(s)	
Certified Copy of Document(s)	Priority	Rema	ırks	The Commissioner is a Deposit Account 20-14	authorized to charge any additional fees to 430.
Response to Miss					
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and Individual name	Charles E. Krueger	<u> </u>	<u> </u>	Reg No.	. 30,077
Signature	(IJU	<u>LZ</u>	18		
Date	4/17	101			
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61	FEE TRANSI	MILIAL	Application Number	09/755,723	
O	່ ∖∖ tor FY 20	001	Filing Date	January 5, 2001	
APR 2	3 2001 (E)		First Named Inventor	GOODMAN, RON, et. al.	
	Patent fees are subject to an	nnual revision.	Examiner Name		
`e ~ .	Patent fees are subject to an		Group Art Unit	2185	
4 /H/	TOTAL AMOUNT OF PAYMENT	(\$) 170	Attorney Docket No.	017002022500	

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Name						147	2,520	147	2,520	For filing a request for reexamination	
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101 7	10 2	01 3	155	Utility filing fee		121	270	221	135	Request for oral hearing	
			60 245	Design filing fee Plant filing fee		138	1,510	138	1,510	Petition to institute a public use proceeding	
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			'5	Provisional filing		141	1,240	241	620	Petition to revive – unintentional	
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Total Claims	-	-20**		Extra Fee		123	50	123	50	Petitions related to provisional applications	
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Fee Code	(\$) 18	Code 203	(\$) 9	Fee Descripti Claims in exce		149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
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102	270	202	135	•	ident claim, if not paid	179	710	279	355	Request for Continued Examination (RCE)	
109	80	209	40		ependent claims over	169	900	169	900	Request for expedited examination of a design application	
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**or number	r previou	ısly paid, if	greater	; For Reissues, se	e above						

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_	Name (Print/Type)	Charles E. Krugge?	Registration No. (Attorney/Agent)	30,077	Telephone	415-576-0290	
["	Signature	Ill	7/2m		Date	4/17/01	

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Filing Date	January 5, 2001	
First Named Inventor	Ron Goodman	
Group Art Unit	2185	
Examiner Name		
Attorney Docket Number	017002-022500US	

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Certificate under 37 CFR 3.73(t				
	SIGNATURE of Applica	ant or Assignee of Re	cord	
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Date April //	1,2006	: 1		
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2185

TRANSMITTAL		Application Number	09/755,723
TRANSMITTAL FORM	ı	Filing Date	January 5, 2001
		First Named Inventor	GOODMAN, RON, et. al.
(to be used for all correspondence after in	nitial filing)	Group Art Unit	2185
		Examiner Name	
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Fee Attached	Fee Attached Drawing		Appeal Communication to Board of Appeals and Interferences
Amendment / Response	Licensi	ng-related Papers	Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
After Final		n Routing Slip (PTO/SB/69) ccompanying Petition	Proprietary Information
Affidavits/declaration(s)		n to Convert to a onal Application	Status Letter
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,723	01/05/2001	Ron Goodman	017002022500	3728
20350	7590 01/15/2003			·
	D AND TOWNSEND A	EXAMINER		
· EIGHTH FLO		PUNIT, PR	AKASH C	
SAN FRANC	ISCO, CA 94111-3834		ART UNIT	PAPER NUMBER
			2175	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/755,723	GOODMAN ET AL.
Office Action Summary	Examiner	Art Unit
	Prakash C Punit	2175
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the	correspondence address
A SHORTENED STATUTORY PERIOD FOR REPL' THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period of Failure to reply within the set or extended period for reply will, by statute - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). Status	36(a). In no event, however, may a reply be ti y within the statutory minimum of thirty (30) da will apply and will expire SIX (6) MONTHS fron cause the application to become ABANDON	mely filed ys will be considered timely. n the mailing date of this communication. ED (35 U.S.C. § 133).
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,	is action is non-final.	
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closed in accordance with the practice under Disposition of Claims	Ex parte Quayle, 1935 C.D. 11,	453 O.G. 213.
4) \boxtimes Claim(s) <u>1-10</u> is/are pending in the application	1.	
4a) Of the above claim(s) is/are withdraw	wn from consideration.	
5) Claim(s) is/are allowed.		
6)⊠ Claim(s) <u>1-10</u> is/are rejected.		
7) Claim(s) is/are objected to.		
8) Claim(s) are subject to restriction and/o	r election requirement.	
Application Papers	_	
9) The specification is objected to by the Examine		minor
10) The drawing(s) filed on is/are: a) acce		
Applicant may not request that any objection to th 11) The proposed drawing correction filed on		
If approved, corrected drawings are required in re		oved by the Examinor.
12) The oath or declaration is objected to by the Ex	· · · ·	
Priority under 35 U.S.C. §§ 119 and 120		
13) Acknowledgment is made of a claim for foreign	n priority under 35 U.S.C. & 1190	a)-(d) or (f)
a) All b) Some * c) None of:	priority and the everency and	-, (-, -, (-,
1. Certified copies of the priority document	s have been received.	
2. Certified copies of the priority document		tion No.
3. Copies of the certified copies of the prior		
application from the International Bu * See the attached detailed Office action for a list	reau (PCT Rule 17.2(a)).	
14) Acknowledgment is made of a claim for domesti	ic priority under 35 U.S.C. § 119	(e) (to a provisional application).
 a) ☐ The translation of the foreign language pro 15)☐ Acknowledgment is made of a claim for domest 	ovisional application has been re tic priority under 35 U.S.C. §§ 12	O a SUPERVISORY PATENT EXAMINER
Attachment(s)	_	TECHNOLOGY CENTER 2100
 Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 	5) Notice of Informa	ry (PTO-413) Paper No(s) Patent Application (PTO-152)

U.S. Patent and Trademark Office PTO-326 (Rev. 04-01)

Application/Control Number: 09/755,723

Art Unit: 2175

Page 2

DETAILED ACTION

1. This action is in response to application dated 01/05/2001. Claims 1-10 are pending in this office action.

Claim Objections

2. Claims 1-4 and 9 are objected to because of the following informalities:

In claim 1, line 9: the claim recitation "base" should be --based--. Appropriate correction is required.

0.8 1/13/23 Claims 2-4 are objects to because claims 2-4 are dependent from objected independent claim 1.

In claim 9, line 12: the claim recitation "base" should be --based--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 4. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Grewe et al. (U.
- S. Patent No.5,670,730.)





Application/Control Number: 09/755,723

Art Unit: 2175

As to claim 1, <u>Grewe et al.</u> teaches a method, performed by a processor in a portable digital music player, for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract, see Fig. 3, and see column 1, lines 6-21), said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure (see Fig. 2, see column 1, lines 47-49), with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see column 1, lines 49-67);

for each track, iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Abstract, see Fig. 3, also see column 3, lines 45-49.)

As to claim 2, <u>Grewe et al</u>. teaches a method, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch (see Abstract, see column 3, lines 47-53.)

As to claim 3, Grewe et al. teaches a method further comprising the acts of:





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Art Unit: 2175

for each branch, utilizing category structure information to file tracks in a specified attribute order (see column 4, lines 19-35.)

As to claim 4, <u>Grewe et al.</u> teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 1, lines 13-21), further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order (see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category (see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53);

utilizing the pointer to access and play a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19) and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface (see column 3, lines 55-57.)

As to claim 5, <u>Grewe et al.</u> teaches a method, implemented by a processor in a portable digital music player, for associating metadata with audio tracks (see Abstract) comprising the acts of:



Application/Control Number: 09/755,723

Art Unit: 2175

opening a formatted file for each track comprising a file data portion and a file attributes portion, with the file attributes portion including a plurality of fields corresponding to category types and file types (see column 3, lines 45-49);

storing an unmodified audio track in the file data portion of the formatted file (see column 4, lines 19-21);

and

storing category type and file type information about the unmodified track in corresponding fields (see column 2, line 37 through column 3, line 28.)

As to claim 6, <u>Grewe et al.</u> teaches a method, performed by a processor in a portable digital music player, for filing audio tracks, stored on a computer readable media, under categories in an in memory tree structure, with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track (see column 1, lines 58-65); and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

As to claim 7, <u>Grewe et al.</u> teaches a method further comprising the act of: selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track (see column 3, lines 45-53.)





Application/Control Number: 09/755,723

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As to claim 8, <u>Grewe et al.</u> teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 2, lines 49-51), further comprising the acts of:

displaying the categories on the display in a hierarchical order see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category when a user utilizes the interface to select a category (see column 3, lines 49-53);

accessing and playing a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19); and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface ((see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53.)

As to claim 9, <u>Grewe et al.</u> teaches a computer program product comprising:

a computer readable medium having program code embodied therein for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract), said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be





Application/Control Number: 09/755,723

Art Unit: 2175

sorted under the branch, and structure information defining how to file tracks based on associated metadata (see Abstract, see summary);

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Fig. 3, see column 3, lines 45-49, also see column 4, lines 10-14.)

As to claim 10, <u>Grewe et al.</u> teaches a computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure,

with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said program code comprising:

program code, executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track (see column 1, lines 58-65); and program code, executed by a processor, for each track, for automatically filing

the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Application/Control Number: 09/755,723

Art Unit: 2175

The following patents are cited to further show the state of art with respect to method of organizing music in general:

U.S. Patent No. 5,670,730 to Grewe et al.

U.S. Patent No. 5,616,876 to Cluts.

U.S. Patent No. 5,918,303 to Yamaura et al.

U.S. Patent No. 5,969,283 to Looney et al.

U.S. Patent No. 5,062,868 to Toriumi.

U.S. Patent No. 5,248,946 to <u>Dwek</u>.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prakash Punit whose telephone number is (703) 305-5914. The examiner can normally be reached on Mondays – Fridays from 9:45 am to 6:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached on (703) 305-3830. The fax numbers of the group is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Prakash Punit Patent Examiner Art Unit 2175 DOV POPOVICI SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2100

January 10, 2003



Notice of References Cited

Application/Control No.	Applicant(s)/Pate	nt Under
09/755,723	GOODMAN ET A	L.
Examiner	Art Unit	_
Prakash C Punit	2175	Page 1 of 1

U.S. PATENT-DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	Α	US-5,670,730	09-1997	Grewe et al.	84/609
	В	US-5,616,876	04-1997	Cluts, Jonathan C.	84/609
	С	US-5,918,303	06-1999	Yamaura et al.	84/609
	D	US-5,969,283	10-1999	Looney et al.	84/609
	Е	US-6,062,868	05-2000	Toriumi, Hiroshi	434/307A
	F	US-6,248,946	06-2001	Dwek, Norman Scott	84/609
	G	US-			
	н	US-			
	_	US-			
	J	US-			
	К	US-			
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	М	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					, 20
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	v	
	w	
	х	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 7



Attorney's Docket No. 6407P212

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re of Application of:

Ron Goodman et al.

Application No.: 09/755,723

Filing Date: January 5, 2001

For: AUTOMATIC HIERARCHICAL

CATEGORIZATION OF MUSIC BY

METADATA

Examiner: Punit, Prakash C.

Art Group: 2175

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

on May 15, 2003____ Date of Deposit

Sarah M. Montgomery

Name of the second of the seco

Signature

Commissioner for Patents Washington, D.C. 20231

AMENDMENT AND RESPONSE TO THE OFFICE ACTION

Sir:

In response to the Office Action of January 15, 2003 please enter the following amendments and consider the following remarks.

AMENDMENT

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Technology Center 2100

1. IN THE CLAIMS

Please cancel claim 5, without prejudice.

Please amend the claims as follows:

SUB

1. (Currently Amended) A method, performed by a processor in a portable digital music media player, for filing audio media tracks stored on a computer readable media, with each audio media track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

for each track, iteratively determining, base based on metadata describing the track if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

BI

2. (Original) The method of claim 1, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch.

- 3. (Original) The method of claim 1 further comprising the acts of:
 for each branch, utilizing category structure information to file tracks in a specified attribute order.
- 4. (Currently Amended) The method of claim 1, where said portable digital music-media player includes a display screen and a user interface for interacting with the display, further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order;

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category;

utilizing the pointer to access and play a track when a user selects a track name through the user interface; and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface.

5. (Canceled)

6. (Currently Amended) A method, performed by a processor in a portable digital music-media player, for filing audio-media tracks, stored on a computer readable media, under categories in an in memory tree structure, with each audio-media track having metadata associated therewith including category name data for naming, said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track; and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

- 7. (Original) The method of claim 6 further comprising the act of: selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track.
- 8. (Currently Amended) The method of claim 6, where said portable digital music-media player includes a display screen and a user interface for interacting with the display, further comprising the acts of:

displaying the categories on the display in a hierarchical order;

displaying all names of tracks associated with a category when a user utilizes the interface to select a category;

accessing and playing a track when a user selects a track name through the user interface; and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface.

9. (Currently Amended) A computer program product comprising:

a computer readable medium having program code embodied therein for filing audio-media tracks stored on a computer readable media, with each audio media track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

program code, executed by a processor, for each track, for iteratively determining, base based on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

10. (Currently Amended) A computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio-media tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each audio-media track having

metadata associated therewith including category name data for naming, said program code comprising:

program code, execute executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track; and

program code executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

B.2

<u>REMARKS</u>

Reconsideration of this application, as amended, is earnestly requested.

Claims 1, 4, 6 and 8 – 10 have been amended as shown above. Claim 5 has

been cancelled without prejudice.

Claims 1-4 and 9 were objected to because of certain informalities. These informalities have been corrected as shown above, and it is submitted that the objections to these claims have been overcome.

Claims 1 - 10 stand rejected under 35 U.S.C. 102(b) as being anticipated by Grewe et al., U.S. Patent 5,670,730 (hereinafter referred to as "Grewe"). This rejection is respectfully traversed.

Grewe teaches a system in which music files are provided with individual headers 36 that include category, artist, and track address information (Fig. 3, col. 3 from ln. 45). The track address information is used to identify the start and/or end location of the file, so that the music player can locate and play the file.

A global header 22 and a table of contents 34 are maintained separate from the individual music files. The global header 22 includes general information about the selections on the chip and how they were encoded, for example the distributor of the music and the bit rate at which the tracks have been encoded. Track selections are listed as part of the table of contents by individual headers 36. (Col. 3 ln. 23, Fig. 3). That is, as can be seen from the description and in particular Figs. 3 and 4, the "table of contents" is nothing more than a sequential list of the individual headers, appended one after another to the table of contents. The table of contents does not appear to be hierarchical at all.

¹ Based on Applicants' understanding, Grewe's use of the term "hierarchical" appears to refer only to the predefined format of the individual headers and/or the global header.

Although it is not clearly stated how this is accomplished, it is a goal of Grewe to permit selection of tracks by category or artist. From the description of Grewe's "table of contents", it appears that such selections can only be made by searching serially through the sequential list of headers in the "table of contents" to identify the individual tracks meeting the criteria. While this may be an acceptable solution for small numbers of tracks, this method is going to be cumbersome when large numbers of tracks are involved or when the database is updated frequently.

Unlike Grewe, the current invention provides a hierarchical definition file that has a tree structure, including category names that name the branch under which tracks are listed. For each track, each branch in which the track belongs is determined, and the track is filed in the appropriate location in the branch. These limitations, found in claims 1 and 10, are not taught or suggested by Grewe.

Similarly, Grewe does not teach or suggest the method of claim 4. While Grewe does mention that music can be selected using the information in the headers (col. 3 lns. 50 – 57), there is little disclosure as to how this is accomplished. Similarly, while Grewe does mention that information can be presented on a display, there is no mention of displaying categories, subcategories and tracks in an hierarchical order for selection as defined in claim 4. Grewe does not even appear to contemplate subcategories at all. In particular, Grewe does not teach or disclose any of the specific displaying or utilizing steps in claim 4.

Similarly, Grewe does not teach the limitations of claims 6 and 9. The filing system of Grewe merely appends each individual header to the last individual header in the "table of contents," which thus is merely an elementary list of track headers (See Figs. 3 and 4). Grewe does not teach automatically filing a track by category name under each selected category, to form a hierarchical track filing scheme, as claimed in claims 6 and 9.

As set forth in MPEP 2131, to anticipate a claim the reference must teach every element of the claim. Since, as discussed above, every element of independent claims 1, 6, 9 and 10 is not taught by Grewe, Applicants submit that these claims are not anticipated by Grewe and are thus allowable.

Further, it is submitted that claims 2-4, 7 and 8 are allowable as being dependent on allowable base claims.

From at least the foregoing reasons, it is respectfully submitted that claims 1 - 4 and 6 –10 are allowable and allowance of the application is earnestly requested.

If there are any additional fees associated with this communication, please charge our Deposit Account No. 02-2666.

Respectfully submitted

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

Date: May 15, 2003

Mark R. Vatuone Reg. No. 53,719

12400 Wilshire Boulevard Seventh Floor Los Angeles, California 90025 (408) 947-8200

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REVOCATION OF POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

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Application No.	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Group Art Unit	2175
Examiner Name	Punit, Prakash C
Attorney Docket Number	6407P212

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I am the: Applicant. Assignee of record of the entire interest. See 37 CFR 3.71. Statement under of 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) Technology Center							03		
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Docket No.: 6407P212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

RON GOODMAN, ET AL.

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL

CATEGORIZATION OF MUSIC BY

METADATA

Art Group: 217

Examiner:

Punit, Prakash C

POWER OF ATTORNEY

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MAY 2 2 2003

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Technology Center 2100

Sir:

Applicant of the above-identified Application, hereby appoints the persons listed on Appendix A attached hereto (which is incorporated by reference and a part of this document), with full power of substitution and revocation, to prosecute this Application and to transact all business in the Patent and Trademark Office connected herewith.

Please direct all future communications concerning this Application to:

André L. Marais, Reg. No. 48,095 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP 12400 Wilshire Boulevard, Seventh Floor Los Angeles, CA 90025 (714) 557-3800

Creative Technology Ltd.

Data:

6407P212

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: Remin Aghevli, Reg. No. 43,462; William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Darriel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahmi, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jeffery S. Helleson, Reg. No. 46,765; James A. Henry, Reg. No. 41,064; William E. Hickman, Reg. No. 46,771; Willmore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,736; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan C. Little, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Lawrence E. Lycke, Reg. No. 38,540; Michael J. Mallie, Reg. No. 36,591; Andre L. Marais, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonathan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Thinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 45,750; Joseph A. Pugh, Reg. No. 52,137; James H. Salter, Reg. No. 35,668; William W. Schaal, Reg. No. 39,018; James C. Schaller, Reg. No. 31,195; Saina S. Shamilov, Reg. No. 48,266; Kevin G. Shao, Reg. No. 45,095; Stanley W. Sokoloff, Reg. No. 25,128; Judith A. Szepesi, Reg. No. 39,393; Edwin H. Taylor, Reg. No. 25,129; Lisa Tom, Reg. No. 52,291; John F. Travis, Reg. No. 43,203; Karry D. Tweet, Reg. No. 45,959; Mark C. Van Ness, Reg. No. 39,865; Thomas A. Van Zandt, Reg. No. 43,219; Mark R. Vatuone, Reg. No. 53,719; Lester J. Vincent, Reg. No. 31,460; John P. Ward, Reg. No. 40,216; Mark L. Watson, Reg. No. 46,322; Thomas C. Webster, Reg. No. 46,154; Chui-Klu Teresa Wong, Reg. No. 48,042; and Norman Zafman, Reg. No. 26,250, my patent attorneys, and Brent Vecchia, Reg. No. 48,011 and Lehua Wang, Reg. No. 48,023, my patent agents, with offices located at 12400 Wilshire Boulevard, 7th Floor, Los Angeles, California 90025, telephone (310) 207-3800; and James R. Thein, Reg. No. 31,710, my patent attorneyl also appoint P. Francois de Villiers, Reg. No. 48,200 of Creative Labs Inc., a corporation having principal offices at 1901 McCarthy Boulevard, Milpitas, California 95035; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, with full power of substitution and revocation; to prosecute this application and to transact all business in the Patent and Trademark Office connected



Docket No. 6407F	212
Applicant/Patent Owner: Creative Technology Ltd.	
00/755 700	
Application No./Patent No.:U9//>>,//3 Filing/Issue Date:U5//UU Entitled: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA	
Creative Technology Ltd., a Limited Liability Corporation (Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, or partnership, university, government agency, and a government agency, and a government agency, and a government agency, and a government agency, and a government agency	— , etc.)
of Singapore,	Í
states that it is:	
1. the assignee of the entire right, title and interest; or	
2. an assignee of an undivided part interest	
in the patent application/patent identified above by virtue of either:	
57	
A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel 011788, Frame 0174, o	r for
which a copy thereof is attached.	
OR	
B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:	
1. From: To:	
The document was recorded in the Patent and Trademark Office at	
Reel 011788 , Frame 0174 , or for which a copy thereof is attached.	
2. From: To:	
The document was recorded in the Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.	
3. From: To: To:	
The document was recorded in the Patent and Trademark Office at	
Reel, Frame, or for which a copy thereof is attached.	
4. From: To:	
The document was recorded in the Patent and Trademark Office at	
Reel, Frame, or for which a copy thereof is attached.	
Additional documents in the chain of title are listed on a supplemental sheet.	
Copies of assignments or other documents in the chain of title are attached.	
[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original	o :t
document) must be submitted to Assignment Division in accordance with 37 CFR Part the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]	<i>3</i> , II
The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of assignee.	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will very depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature
André L. Marais, Reg. No. 48,095
Typed or printed name



Docket No.: 6407P212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

RON GOODMAN, ET AL.

Application No.: 09/755,723

January 5, 2001 Filed:

AUTOMATIC HIERARCHICAL For:

CATEGORIZATION OF MUSIC BY

METADATA

Art Group: 2175

Examiner: Punit, Prakash C

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MAY 2 2 2003

Technology Center 2100

PETITION FOR EXTENSION OF TIME PURSUANT TO 37 C.F.R. § 1.136(a)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Date: 5/17/03

12400 Wilshire Blvd., 7th Floor

110.00 OP

Los Angeles, California 90025

Telephone: (408) 947-8200

05/21/2003 NMDHAMM1 00000022 09755723

01 FC:1251

Sir:

In accordance with 37 C.F. R. § 1.136(a), Applicants for the above-identified application respectfully Petition the Commissioner for a one (1) month extension of time, extending the period for response to May 15, 2003, from the Office Action dated January 15, 2003. The petition filing fee of \$110.00 and a Response to Office Action are attached.

If it should be determined that a longer extension of time is required to prevent this application from being abandoned, please charge any additional fees to Deposit Account No. 02-2666. A copy of the Fee Transmittal is enclosed for deposit account charging purposes.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Mark R. Vatuone, Reg. No. 53,719

CERTIFICATE OF MAILING/TRANSMISSION I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop

Non-Free Amendment, Commissioner for Patents, P.O. Box 1450,

Alexandria, VA 22313-1450.

Sarah M. Montgomery

MAY 2 0 2003 WE TRADENSE

TDANGUITAL FORM			Application No.	09/755,723		
TRANSMITTAL FORM			Filing Date	January 5, 2001		
(to be used for all correspondence after initial filing)		First Named Inventor	Ron Goodman	RECEIV		
		Group Art Unit	2175			
			Examiner Name	Punit, Prakash C	MAY 2 2 7	
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	SIGNATUR	E OF APPLICA	NT, ATTORNEY, OR AG	SENT		
Firm Mark R. Vatuone, Reg. No. 53,719						
or Individual name BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP						
Signature Mal R. Palmur						
Date	5/15/2003	·				
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FEE TRANSMITTAL for FY 2003 Complete if Known Application Number 09/755,723 Filing Date January 5, 2001 Effective 01/01/2003. Patent fees are subject to annual revision. First Named Inventor Ron Goodman Examiner Name Punit, Prakash C Applicant claims small entity status. See 37 CFR 1.27. Group/Art Unit 2175 MAY 2 2 2003

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Based on PTO/SB/17 (01-03) as modified by Blakely, Solokoff, Taylor & Zafman (wtr) 05/02/2003. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature

Date









UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandra, Vignia 22313-1450 www.usplo.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/755,723	01/05/2001	Ron Goodman	017002022500	3728
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	AND TOWNSEND	EXAMINER		
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SAN FRANC			ART UNIT	PAPER NUMBER
			2175	10
	•		DATE MAILED: 07/29/2003	•

Please find below and/or attached an Office communication concerning this application or proceeding.

	70	Application No.	Applicant(s)
1	-	09/755,723	GOODMAN ET AL.
	Office Action Summary	Examiner	Art Unit
	•		
	The MAILING DATE of this communicat	Charles L. Rones ion appears on the cover sheet wit	h the correspondence address
Period fo	or Reply		
THE I - External efter - If the - If NC - Failu	ORTENED STATUTORY PERIOD FOR MAILING DATE OF THIS COMMUNICA nsions of time may be available under the provisions of 37 SIX (6) MONTHS from the mailing date of this communic e period for reply specified above is less than thirty (30) date of period for reply is specified above, the maximum statutor re to reply within the set or extended period for reply will, reply received by the Office later than three months after the patent term adjustment. See 37 CFR 1.704(b).	TION. CFR 1.136(a). In no event, however, may a reation. ys, a reply within the statutory minimum of thirty y period will apply and will expire SIX (6) MONT by statute, cause the application to become ABA	ply be timely filed (30) days will be considered timely. HS from the mailing date of this communication.
1)🖂	Responsive to communication(s) filed	on <i>20 May 2003</i> .	
2a)⊠		This action is non-final.	
3)□	Since this application is in condition for		ers prosecution as to the merits is
•	closed in accordance with the practice ion of Claims	under Ex parte Quayle, 1935 C.D	0. 11, 453 O.G. 213.
4)⊠	Claim(s) 1-10 is/are pending in the app	lication.	
	4a) Of the above claim(s) is/are v	vithdrawn from consideration.	
5)	Claim(s) is/are allowed.		
6)⊠	Claim(s) <u>1-10</u> is/are rejected.		
7)	Claim(s) is/are objected to.		
8)□	Claim(s) are subject to restriction	and/or election requirement.	
Applicati	on Papers		
9)[The specification is objected to by the Ex	caminer.	
10)	The drawing(s) filed on is/are: a)[\square accepted or b) \square objected to by th	e Examiner.
_	Applicant may not request that any objection		
11)[_]	The proposed drawing correction filed or	ı is: a)∏ approved b)∏ di	sapproved by the Examiner.
	If approved, corrected drawings are require	• •	
	The oath or declaration is objected to by	the Examiner.	
	ınder 35 U.S.C. §§ 119 and 120		
	Acknowledgment is made of a claim for	foreign priority under 35 U.S.C. §	119(a)-(d) or (f).
a)[☐ All b)☐ Some * c)☐ None of:		
	1. Certified copies of the priority doc	uments have been received.	
	2. Certified copies of the priority doc	uments have been received in Ap	pplication No
* 5	Copies of the certified copies of the application from the Internation application from the Internation for the attached detailed Office action for the attached detailed	nal Bureau (PCT Rule 17.2(a)).	_
	Acknowledgment is made of a claim for d	•	
a) The translation of the foreign languates Acknowledgment is made of a claim for o	age provisional application has be	en received.
Attachmen		omestic priority under 33 0.3.0.	33 120 aliu/01 121.
1) Notic	e of References Cited (PTO-892) of Oraftsperson's Patent Drawing Review (PTO-tration Disclosure Statement(s) (PTO-1449) Paper	948) 5) Notice of In	ummary (PTO-413) Paper No(s) formal Patent Application (PTO-152)





Application/Control Number: 09/755,723

Art Unit: 2175

Page 2

DETAILED ACTION

The amendment timely filed May 20, 2003. Claims 1-10 are pending in this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by <u>Grewe et al.</u> (U. S. Patent No. 5,670,730.)

As to claim 1, <u>Grewe et al.</u> teaches a method, performed by a processor in a portable digital music player, for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract, see Fig. 3, and see column 1, lines 6-21), said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure (see Fig. 2, see column 1, lines 47-49), with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of





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tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see column 1, lines 49-67);

for each track, iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Abstract, see Fig. 3, also see column 3, lines 45-49.)

As to claim 2, <u>Grewe et al</u>. teaches a method, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch (see Abstract, see column 3, lines 47-53.)

As to claim 3, <u>Grewe et al.</u> teaches a method further comprising the acts of: for each branch, utilizing category structure information to file tracks in a specified attribute order (see column 4, lines 19-35.)

As to claim 4, <u>Grewe et al.</u> teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 1, lines 13-21), further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order (see column 2, lines 49-51, also see column 3, lines 38-44);





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displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category (see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53);

utilizing the pointer to access and play a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19) and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface (see column 3, lines 55-57.)

As to claim 5, <u>Grewe et al.</u> teaches a method, implemented by a processor in a portable digital music player, for associating metadata with audio tracks (see Abstract) comprising the acts of:

opening a formatted file for each track comprising a file data portion and a file attributes portion, with the file attributes portion including a plurality of fields corresponding to category types and file types (see column 3, lines 45-49);

storing an unmodified audio track in the file data portion of the formatted file (see column 4, lines 19-21);

and

storing category type and file type information about the unmodified track in corresponding fields (see column 2, line 37 through column 3, line 28.)





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As to claim 6, <u>Grewe et al.</u> teaches a method, performed by a processor in a portable digital music player, for filing audio tracks, stored on a computer readable media, under categories in an in memory tree structure, with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track (see column 1, lines 58-65); and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

As to claim 7, <u>Grewe et al.</u> teaches a method further comprising the act of: selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track (see column 3, lines 45-53.)

As to claim 8, <u>Grewe et al.</u> teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 2, lines 49-51), further comprising the acts of:

displaying the categories on the display in a hierarchical order see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category when a user utilizes the interface to select a category (see column 3, lines 49-53);

accessing and playing a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19); and





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accessing and playing a collection of tracks within a category when a user selects a category through the user interface ((see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53.)

As to claim 9, <u>Grewe et al.</u> teaches a computer program product comprising:

a computer readable medium having program code embodied therein for filing
audio tracks stored on a computer readable media, with each audio track having
metadata associated therewith including category value data for naming attributes of the
track and type data indicating the type of track (see Abstract), said program code
comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see Abstract, see summary);

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Fig. 3, see column 3, lines 45-49, also see column 4, lines 10-14.)

As to claim 10, Grewe et al. teaches a computer program product comprising:





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Art Unit: 2175

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure.

with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said program code comprising:

program code, executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track (see column 1, lines 58-65); and program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

Response to Arguments

Applicant's arguments filed May 20, 2003 have been fully considered but they are not persuasive.

Firstly, Applicant argues that Grewe does not disclose using a hierarchical definition file as stated in the claim.

In response, Examiner maintains that Grewe discloses such as stated above in the rejection of the claim wherein the hierarchical arrangement of headers and the table of contents are deemed to be hierarchical.





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does not disclose display categories or

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Secondly, Applicant argues that Grewe does not disclose display categories or subcategories and tracks in an hierarchical order for selection.

In response, Examiner maintains that Grewe discloses such wherein Grewe discloses that the information is displayable. See 2:36-54.

Lastly, Applicant argues that Grewe does not disclose automatically filing a track by category name under a selected category to form a hierarchical track filing scheme.

In response, Examiner maintains that Grewe discloses such wherein Grewe discloses that the headers are arranged hierarchically and that the headers contains a music filed to which the track of music belongs, such as jazz, classical, country, etc. which are deemed to be categories of music arranged hierarchically.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.





Application/Control Number: 09/755,723

Art Unit: 2175

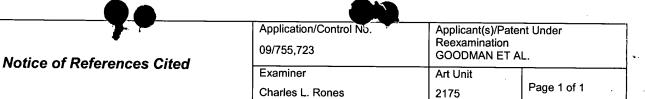
Page 9

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Rones whose telephone number is (703-306-3030. The examiner can normally be reached on Mondays – Fridays from Monday-Thursday 8am-4pm pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached on (703-305-3830. The fax numbers of the group is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Charles L. Rones Primary Examiner Art Unit 2175



2175

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	Α	US-2003/0016940 A1	01-2003	Robbins, Gerald V.	386/46
	В	US-			
	С	US-	"		
	D	US-			
	Е	US-			
	F	US-			
	G	US-			
	Н	US-			
	1	US-			
	J	US-			
	к	US-			
	L	US-			
	М	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Z	S				
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
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	x	is reference is not hope furnished with this Office at the Control of the Control

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 10





08791

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS P.O. Box 1450 Alexandria, Viginia 22313-1450 www.uspto.gov

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

09/755,723

LOS ANGELES, CA 90025

BLAKELY SOKOLOFF TAYLOR & ZAFMAN

12400 WILSHIRE BOULEVARD, SEVENTH FLOOR

01/05/2001

Ron Goodman

017002022500

CONFIRMATION NO. 3728

OC000000010623703*

Date Mailed: 08/01/2003

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/20/2003.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

ANGELA S WHITE 2100 (703) 308-8264

OFFICE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS PO. Box 1450 Alexandria, Vingraia 22313-1450 www.usplu.gov

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

09/755,723

01/05/2001

Ron Goodman

017002022500

CONFIRMATION NO. 3728

20350 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER **EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834**

OC000000010623641

Date Mailed: 08/01/2003

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/20/2003.

• The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

ANGELA S WHITE 2100 (703) 308-8264

OFFICE COPY





NOTICE OF APPEAL FROM THE EXAMINE	Docke	et Number (Optiona	al)	
BOARD OF PATENT APPEALS AND INTER	RFERENCES			6407P212
I hereby certify that this correspondence is being deposited	In re Application o	f		
with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope	Ron Goodman,	et al.		
addressed to: Mail Stop AF, Commissioner for Patents, P.O.	Application Number	er	Filed	
Box 1450, Alexandria, VA 22313-1450. 10/29/03	09/755,723		01/05/2	2001
Signature Dawn Shaw	For AUTOMATIC HI	ERARC	CHICAL CATEGO	ORIZATION
Typed or printed	Art Unit	Ex	aminer	
name Dawn Shaw	2175	Ch	arles Rones	
Applicant hereby appeals to the Board of Patent Appears examiner. The fee for this Notice of Appeal is (37 CFR 1.17(b))	als and Interference	s from t	he last decision of	the \$330.00
Applicant claims small entity status under 37 CFR 1. shown above is reduced by half, and the resulting fe		fee	_	
A check in the amount of the fee is enclosed.			-	CEIVED
☐ Payment by credit card. Form PTO-2038 is attached. NOV 0 6 200				0 6 2003
The Director has already been authorized to charge fees in I have enclosed a duplicate copy of the fee transmittal.	this application to a D	eposit A	Technolo	ogy Center 2100
The Director is hereby authorized to charge any fees overpayment to Deposit Account No. <u>02-2666</u> . I hav transmittal.				
A petition for an extension of time under 37 CFR 1.1	36(a) (PTO/SB/22) i	is enclos	sed.	
WARNING: Information on this form may becobe included on this form. Provide credit card i	•			
I am the			100	
applicant/inventor.				·
assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	A		Marais, Reg. No. ed or printed name	
attorney or agent of record.			101	19/10
attorney or agent acting under 37 CFR 1.34(a). Registration number if acting under 37 CFR 1.34(a).				Date
NOTE: Signatures of all the inventors or assignees of record of the er if more than one signature is required, see below*.	ntire interest or their repre	esentative(s) are required. Submit	multiple forms
Total of forms are submitted.				

Based on PTO/SB/31 (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wir) 09/11/2003. 11/05/2003 BABRAHA1 00000124 09755723 SEND TO: Mail Stop Appeal, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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Based on PTO/SB/21 (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wtr) 09/11/2003. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



TRANSMITTAL FORM			Application No.	09/755,723	
IRANS	SWILLALF	OKIM	Filing Date	January 5, 2001	
(to be used for all	correspondence afte	er initial filing)	First Named Inventor	Ron Goodman	
			Art Unit	2175	
			Examiner Name	Charles Rones	
Total Number of F	Pages in This Submissi	on 4	Attorney Docket Number	6407P212	
	ENCLO	SURES (chec	k all that apply)		
Fee Transmittal	Form	Drawing(s)		After Allowance Communication to Group	
Fee Attac	hed	Licensing-r	elated Papers	Appeal Communication to Board of Appeals and Interferences	
Amendment / Re	esponse	Petition		Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)	
After Fina Affidavits/	ıl /declaration(s)	Petition to 0 Provisional	Convert a Application	Proprietary Information	
Extension of Tim	ne Request	Power of Al Change of	ttorney, Revocation Correspondence Address	Status Letter	
Express Abandonment Request		Terminal Disclaimer		Other Enclosure(s) (please identify below):	
Information Disc	closure Statement	Request for Refund		Return Postcard	
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Cirm					
or André L. Marais, Reg. No. 48					
Individual name BLAKELY, SOKOLOFF, 7			TAYLOR & ZAFM	AN LLP	
Signature 244 CR					
Date	Date 10/29(0)				
	CERTIF	CATE OF MAIL	ING/TRANSMISSION		
	irst class mail in an env			Service on the date shown below with oner for Patents, P.O. Box 1450,	
Typed or printed na		- / /			
Signature	Signature Date 1/29/03				



FEE RAMSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT (\$)

Complete if Knovan				
Application Number	09/755,723			
Filing Date	January 5, 2001			
First Named Inventor	Ron Goodman			
Examiner Name	Charles Rones			
Group/Art Unit	2175			
Attorney Docket No.	6407P212 H H H			

METHOD OF PAYMENT (check all that apply)					FEE CALCULATION (continued) 1 0 6 2003										
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	530	2003	265	Plant filing fee		 	1403	290	2403	145	Request for oral heari	ing		Ī	
1000	770	2004	385	Reissue filing fee	e.		1451	1,510	2451	1,510	Petition to institute a p	public use proceed	ling	Ī	
1005	160	2005	80	Provisional filing			1452	110	2452	55	Petition to revive - una	avoidable		Ī	
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1205	18	2205	9 '	**Reissue claims in original patent	1 excess of 20 an	nd over	Other fe	ee (specify)		_	-			}	-
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Name (Print/Type) André L. Marais					ttomey/Age		4	48,095	Telephone	(408)	<i>)</i> 94 /·	-8200			

330.00

Based on PTO/SB/17 (08-03) as modified by Makely, Selektoff, Taylor & Zafman (wir) 08/11/2003. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature

Date

10/29/10







United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	. FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.			
09/755,723	01/05/2001	Ron Goodman	017002022500	3728			
8791	7590 11/17/2003		EXAMINER				
	SOKOLOFF TAYLOR &	RONES, CHARLES					
	LES, CA 90025	ENTHILLOOK	ART UNIT	PAPER NUMBER			
	•	·	2175	17			
			DATE MAILED: 11/17/2003	· E			

Please find below and/or attached an Office communication concerning this application or proceeding.

4

	Application No.	Applicant(s)	2
Advisory Action	09/755,723	GOODMAN ET AL.	
·	Examiner	Art Unit	<u>(</u> .
	Charles L. Rones	2175	
The MAILING DATE of this communication appe	ars on the cover sheet with the c	orrespondence add	ress
THE REPLY FILED FAILS TO PLACE THIS APPI Therefore, further action by the applicant is required to avec final rejection under 37 CFR 1.113 may only be either: (1) condition for allowance; (2) a timely filed Notice of Appeal Examination (RCE) in compliance with 37 CFR 1.114.) a timely filed amendment which	ition. A proper reply of places the applica	tion in
PERIOD FOR RE	PLY [check either a) or b)]		
a) The period for reply expires <u>3</u> months from the mailing date			
b) The period for reply expires on: (1) the mailing date of this A no event, however, will the statutory period for reply expire Is ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS 706.07(f).	ater than SIX MONTHS from the mailing FILED WITHIN TWO MONTHS OF TH	g date of the final rejecti RE FINAL REJECTION.	on. See MPEP
Extensions of time may be obtained under 37 CFR 1.136(a). The fee have been filed is the date for purposes of determining the period of fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of (2) as set forth in (b) above, if checked. Any reply received by the Officimely filed, may reduce any earned patent term adjustment. See 37 C	f extension and the corresponding amo the shortened statutory period for reply the later than three months after the mail	unt of the fee. The appropriate the final	opriate extension Office action: or
1. A Notice of Appeal was filed on <u>03 November 2003</u>.37 CFR 1.192(a), or any extension thereof (37 CFF	Appellant's Brief must be filed v	within the period set f the appeal.	forth in
2. The proposed amendment(s) will not be entered be	ecause:		
(a) they raise new issues that would require further	er consideration and/or search (s	see NOTE below);	
(b) they raise the issue of new matter (see Note b	elow);	·	
 (c) they are not deemed to place the application in issues for appeal; and/or 	n better form for appeal by mate	rially reducing or sir	nplifying the
(d) they present additional claims without canceling	ng a corresponding number of fi	nally rejected claim	S.
NOTE:			
3. Applicant's reply has overcome the following reject	ion(s):		
4. Newly proposed or amended claim(s) would canceling the non-allowable claim(s).	be allowable if submitted in a se	parate, timely filed	amendment
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for application in condition for allowance because:	reconsideration has been consi	dered but does NO	T place the
 The affidavit or exhibit will NOT be considered becaraised by the Examiner in the final rejection. 	ause it is not directed SOLELY to	o issues which were	e newly
7. For purposes of Appeal, the proposed amendment explanation of how the new or amended claims we	(s) a)∏ will not be entered or b) ould be rejected is provided belo		and an
The status of the claim(s) is (or will be) as follows:			
Claim(s) allowed:			
Claim(s) objected to:			
Claim(s) rejected:	•		
Claim(s) withdrawn from consideration:			
8. The drawing correction filed on is a) appr	oved or b) disapproved by the	ne Examiner.	
9. Note the attached Information Disclosure Statemen	•		
10. Other:	()()	·	•
		Charles L. Rones Primary Examiner	ones
		Art Unit: 2175	

U.S. Patent and Trademark Office PTOL-303 (Rev. 11-03)

	OTP E VO
	FEB 0 3 2004
\bigcap	FIFT & TRADEMIN

REQUEST FOR

CONTINUED EXAMINATION (RCE) TRANSMITTAL

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. 1450
Alexandria, VA 22313-1450

Application No.	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Art Unit	2175
Examiner Name	Rones, Charles
Attorney Docket Number	6407P212

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR § 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1.	S	ubmi	ission re	equired under 37 C.F.R. § 1.114	
	a.	☐ . i.	Previo	usly submitted on side the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on any unentered amendment(s) referred to above will be entered).	RECEIVED
		ii. iii.	☐. Of	onsider the arguments in the Appeal Brief or Reply Brief previously filed on her	Technology Center 210
\	b.	⊠ i. ii.		sed nendment/Reply iii.	DS)
3.	(M	liscel	laneou		
	a.		Suspe period	nsion of action on the above-identified application is requested under 37 C.F.R of months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) re	l. § 1.103(c) for a equired)
	b.		Other		
3.	F	ees	The R	CE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.	
	a.			irector is hereby authorized to charge the following fees, or credit any overpayr it Account No. <u>02-2666</u> .	ments, to
		i. ii. iii.	⊠ E	CE fee required under 37 C.F.R. § 1.17(e) and any additional claims fee(s) tension of time fee (37 C.F.R. § 1.136 and 1.17) ther: (\$.00)	
	b.	\boxtimes	Check	in the amount of \$880.00 enclosed	
	C.		•	ent by credit card (Form PTO-2038 enclosd)	
				ING: Information on this form may become public. Credit card information should ed on this form. Provide credit card information and authorization on PTO-2038.	I not be
				SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
Na	me	(Print	t/Турө)	Mark R. Vatuorie Registration No. (Attorney/Agent)	53,719
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				CERTIFICATE OF MAILING OR TRANSMISSION	
				orrespondence is being deposited with the United States Postal Service on the date shown below elope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 223	
Na	me ((Print/	Турө)	Dawn Shaw	
Sig	natur	re		Dawn Shaw Date 1/29/04	

Based on PTO/SB/30 (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wir) 09/11/2003. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

02/04/2004 EFLORES 00000157 09755723

01 FC:1801

770.00 DP



FEETRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27.

OTAL AMOUNT OF PAYMENT	(\$)	880.0

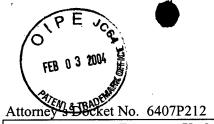
Complete if Known				
Application Number	09/755,723			
Filing Date	January 5, 2001			
First Named Inventor	Ron Goodman			
Examiner Name	Rones, Charles			
Group/Art Unit	2175			
Attornov Docket No.	6/07D212			

						
METHOD OF PAYMENT (check all that apply)				FE	E CALCULATION (continued)	
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Deposit Account	Fee	Fee	Fee	Fee	Technology	Center 2
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Account Number 02-2666	1051	130	2051	65	Surcharge - late filing fee or oath	
Deposit	1052	50	2052	25	Surcharge - late provisional filling fee or cover sheet.	
Account Name Blakely, Sokoloff, Taylor & Zafman LLP	2053	130	2053	130	Non-English specification	
The Commissioner is authorized to: (check all that apply)	1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
Credit any overpayments	1804	920 *	1804	920		
					Examiner action	
	1805	1,840 *	1805	1,840	Requesting publication of SIR after Examiner action	
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account	1251	110	2251	55	Extension for reply within first month	110.0
FEE CALCULATION	1252	420	2252	210	Extension for reply within second month	
1. BASIC FILING FEE	1253	950	2253	475	Extension for reply within third month	-
Large Entity Small Entity	1254	1,480	2254	740	Extension for reply within fourth month	
Fee Fee Fee Fee Description Fee Paix		1,210	2255	605	Extension for reply within fifth month	
Code (\$) Code (\$)	1404	330	2401	165	Notice of Appeal	
1001 770 2001 385 Utility filing fee	1402	330	2402	165	Filing a brief in support of an appeal	
1002 340 2002 170 Design filing fee	1403	290	2403	145	Request for oral hearing	
1003 530 2003 265 Plant filing fee	1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1004 770 2004 385 Reissue filing fee	1452	110	2452	55	Petition to revive - unavoidable	
1005 160 2005 80 Provisional filing fee	1453	1,330	2453	665	Petition to revive - unintentional	
SUBTOTAL (1) (5)	1501	1,330	2501	665	Utility issue fee (or reissue)	
2. EXTRA CLAIM FEES Extra Fee from	1502	480	2502	240	Design issue fee	
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Total Claims 9 20 = 0 X 18.00 = \$0.0	1460	130	2460	130	Petitions to the Commissioner	
ndependent 4 5* = 0 x 86.00 = \$0.0	1807	50	1807	50	Prosessing fee under 37 CFR 1.17(q)	
Multiple Dependent =	1806	180	1806	180	Submission of Information Disclosure Stmt	
Large Entity Small Entity	8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
Fee Fee Fee Fee Description Code (\$)	1809	770	1809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1202 18 2202 9 Claims in excess of 20	1810	770	2810	385	For each additional invention to be	
1201 86 2201 43 Independent claims in excess of 3	1810	770	2010	303	examined (37 CFR § 1.129(b))	
1203 290 2203 145 Multiple Dependent claim, if not paid 1204 86 2204 43 **Reissue independent claims over original	1801	770	2801	385	Request for Continued Examination (RCE)	770.0
patent	1802	900	1802	900	Request for expedited examination of a design application	
1205 18 2205 9 **Reissue claims in excess of 20 and over original patent	Other fe	ee (specify)	•			
SUBTOTAL (2) (\$) 0.0						
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Name (Print/Type) Mark R. Vatuorie	14	ttomey/Age	nnt)	1 3	53.719 Telephone (408) 9	T/-0400

Based on PTO/SB/17 (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wtr) 08/11/2003. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature

Date



5 C 2/10/04

Patent

Response Under 37 CFR 1.116 — Expedited Procedure Examining Group 2175

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ron Goodman et al.

Application No.: 09/755,723

Filed: January 5, 2001

For:

AUTOMATIC HIERARCHICAL

CATEGORIZATION OF MUSIC BY

METADATA

RECEIVED

Examiner: Rones, Charles

FEB 0 5 2004

Art Group: 2175

Technology Center 2100

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on 1/29/04
Date of Deposit

Dawn R. Shaw

Name of Person Mailing Correspondence

Signature

1/29/04

Mail Stop RCE Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT ACCOMPANYING REQUEST FOR CONTINUING EXAMINATION

Sir:

Further to the Notice of Appeal of November 3, 2003 and to the Final Office Action mailed July 29, 2003, Applicants respectfully request the Examiner to enter the following amendment and reconsider the present application in view of the submission below.

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Currently Amended) A method, performed by a processor in a digital media player, for filing media tracks stored on a computer_-readable mediamedium, with each media track having metadata associated therewith including category value attribute data for naming-identifying attributes of the track-and type data indicating the type of track, said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure <u>having a</u> plurality of branches, with the <u>hierarchical tree structure file-including category names for naming the branch-branches</u> under which tracks are sorted, <u>subcategory names for defining subcategories within the branches</u>, <u>track type information specifying which type of tracks are to be sorted under the branch</u>, and structure information defining <u>how to file tracks based on associated metadata the hierarchy of branch names and subcategory names; and</u>

for each track, determining, based on metadata describing the attribute data associated with the track if the track belongs in the branchone or more of the branches, and, for each branch in which the track belongs, filing the track under one or more subcategories traversing the branch to determine the appropriate location to file the track.

2. (Currently Amended) The method of claim 1, where said act of searching further comprises the acts of comprising:

utilizing track type information to file only tracks of a specified type under a particular branch.

3. (Currently Amended) The method of claim 1, further comprising the acts of: for each branch, utilizing category structure information to file tracks in a specified attribute order.

(Currently Amended) The method of claim 1, where said digital media player includes a display screen and a user interface for interacting with the display screen, further the method comprising the acts of:

displaying the categories and subcategories on the display <u>screen</u> in a hierarchical order; displaying all-names of <u>at least some</u> tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category;

monitoring selection of a track name by the user and, in response to the selection, playing the track utilizing the pointer to access and play a track when a user selects a track name through the user interface; and

monitoring selection of a category or subcategory by the user and, in response to the selection, playing utilizing the pointer to access and play a collection of tracks within a the selected category or subcategory when a user selects a category or subcategory through the user interface.

5. (Canceled)

6. (Currently Amended) A method, performed by a processor in a digital media player, for filing media tracks, stored on a computer-readable mediamedium, under categories in an in memory a tree structure, with each media track having metadata attribute data identifying attributes of the track associated therewith, the attribute data including category name data-for naming, said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata-attributes of each track; and

for each track, automatically filing the track by category name under each selected category <u>associated</u> with the <u>attributes</u> to form <u>a-an</u> hierarchical track filing scheme.

7. (Currently Amended) The method of claim 6, further comprising the act of: selecting the categories to be the -album Album including the track, the title of the track, and the name of the artist that recorded the track.

8. (Currently Amended) The method of claim 6, where said digital media player includes a display screen and a user interface for interacting with the display screen, further the method comprising the acts of:

displaying the categories on the display screen in a hierarchical order;

displaying all names of tracks associated with a category when a user utilizes the <u>user</u> interface to select a category;

accessing and playing a track when a user selects a track name through the user interface; and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface.

9. (Currently Amended) A computer program product comprising:

a computer readable medium having program code embodied therein for filing media tracks stored on a computer readable mediamedium, with each media track having metadata associated therewith including category value attribute data for naming identifying attributes of the track-and type data indicating the type of track, said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure <u>having a plurality of branches</u>, with the <u>hierarchical tree structure file</u> including category names for naming the <u>branch branches</u> under which tracks are sorted, <u>subcategory names for defining subcategories within the branches track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata the hierarchy of branch names and subcategory names within the branches;</u>

program code, executed by a processor, for each track, for determining, based on metadata describing the attribute data associated with the track, if the track belongs in one or more of the branch branches, and, for each branch in which the track belongs, filing the track under one or more subcategories traversing the branch to determine the appropriate location to file the track.

10. (Currently Amended) A computer program product comprising:

a computer readable medium for having program code embodied therein for filing media tracks, stored on a computer_readable mediamedium, under categories in an in-memorya tree structure, with each media track having metadata attribute data identifying attributes of the track associated therewith, the attribute data including category name data for naming, said program code comprising:

program code, execute by a processor, upon startup or when a track is added or changed, for searching the metadata attributes of each track; and

program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a an hierarchical track filing scheme.

11. (New) A method of arranging media information relating to media tracks stored on a computer-readable medium, the method comprising:

reading a media definition file that includes a plurality of categories, wherein each category groups tracks having corresponding attributes associated with the media tracks; and for each track.

identifying a plurality of attributes associated with the track; identifying a category associated with each attribute; and grouping the track within each category that has been identified.

- 12. (New) The method of claim 11, wherein each track is grouped within at least two categories of the media definition file and each category includes a list of tracks having corresponding attributes.
- 13. (New) The method of claim 11, wherein a plurality of track identifiers are provided in each category, each track identifier being to identify a track associated with the category.
- 14. (New) The method of claim 11, wherein the plurality of categories relates to music and the categories comprise one of an album name category, an artist name category, and a genre category.

16. (New) The method of claim 15, wherein the category comprises an artist name category that includes at least one subcategory identifying a group with which the artist is associated.

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- 17. (New) The method of claim 15, wherein the category comprises a genre category that includes at least one subcategory identifying a group or artist associated with the genre category.
- 18. (New) The method of claim 11, wherein at least one category of the plurality of categories comprises a list of all tracks associated with the media definition file irrespective of their associated attributes
- 19. (New) The method of claim 1, wherein a link to the same media track is provided in more than one category.
- 20. (New) The method of claim 1, wherein said grouping the track within each category comprises providing an identifier within each category that has been identified, the identifier identifying the track associated with the category.
- 21. (New) A method of displaying media information on a display screen, the media information relating to media tracks stored on a computer-readable medium, the method comprising:

retrieving display data for display on the display screen from a media definition file that includes a plurality of categories, each category corresponding to an attribute associated with the media tracks, the display screen layout being based on the plurality of categories; and

for each track, displaying the track under each category with which it is associated.

- 22. (New) The method of claim 21, wherein the categories comprise at least one of an artist name category, an album name category and a genre category, the display screen layout identifying the at least one category.
- 23. (New) A method of arranging media information relating to media tracks stored on a computer-readable medium, the method comprising:

identifying a plurality of attributes associated with a media track;
identifying at least two categories, each identified category corresponding to an attribute;
and

providing a link to the track in each of the categories identified to provide a plurality of links in each category that identify a plurality of tracks associated with the category.

REMARKS

1. Summary of the Office Action

Claims 1-4 and 6-10 stand rejected under 35 U.S.C.§ 102(b) as allegedly being anticipated by U.S. patent no. 5,670,730 (hereinafter "Grewe et al.").

2. Response to § 102 Rejections

Applicants respectfully traverse this rejection for the reasons set out below, and ask the Examiner for reconsideration.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." <u>Verdegaal Bros. v. Union Oil Co. of California</u>, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Grewe teaches a system in which music files are arranged track-by-track. Each file is provided with individual headers 36 that include category, artist, and track address information (Figures 2-4 and col. 3 from ln. 29 onwards) associated with the particular track. The track address information is used to identify the start and/or end location of the file, so that the music player can locate and play the file. Clearly, the tracks are **arranged in a track-by-track fashion** and not based on the individual header 36. As can be seen from the description and in particular Figs. 3 and 4, the table of contents 34 is nothing more than a sequential list of the individual headers, ordered track-by-track, one after the other. The category information (see category field 40) and the artist information (see artist field 42) are thus **dispersed**. Thus, it is not readily apparent which set of tracks is in which genre or which set of tracks is performed by one particular artist.

Claim 1, as amended, reads as follows:

"1. A method, performed by a processor in a digital media player, for filing media tracks stored on a computer-readable medium, with each media track having attribute data for identifying attributes of the track, said method comprising:

reading a definition file that defines an ordered hierarchical tree structure having a plurality of branches, with the hierarchical tree structure including category names for naming branches <u>under which tracks are sorted</u>, subcategory names for defining subcategories within the branches, and structure information defining the hierarchy of branch names and subcategory names; and

for each track, determining, based on the attribute data associated with the track if the track belongs in one or more of the branches, and, for each branch in which the track belongs, filing the track under one or more subcategories"

Claim 1 includes the limitation of a "hierarchical tree structure including category names for naming branches <u>under which tracks are sorted</u>"

Firstly, Grewe does not teach or suggest "reading a definition file that defines an ordered hierarchical tree structure having a plurality of branches, with the hierarchical tree structure including category names for naming branches <u>under which tracks are sorted</u>, subcategory names for defining subcategories within the branches, and structure information defining the hierarchy of branch names and subcategory names." In Grewe, the tracks are not sorted according to category names that are provided in a branch but rather in sequential blocks of memory locations. There is no <u>hierarchical relationship</u> between the category field 40 or the artist field 42 with a particular track and any hierarchy in Grewe.

Secondly, as the tracks in Grewe are filed sequentially in memory according to track number, the limitation of claim 1 of "for each track, determining, based on the attribute data associated with the track if the track belongs in one or more of the branches, and, for each branch in which the track belongs, filing the track under one or more subcategories" is also not described or even suggested in Grewe.

In view of the above, it is submitted that Grewe does not describe or even suggest all the limitations of claim 1. Accordingly, claim 1 is allowable and, as claims 1-4 are dependent upon claim 1, they are also allowable.

Claim 9, as amended, also includes the limitation of "reading a definition file that defines an ordered hierarchical tree structure having a plurality of branches, with the hierarchical tree structure including category names for naming branches <u>under which tracks are sorted.</u>" Claim 9 also includes the limitation wherein, for each track, "determining, based on the attribute data associated with the track, if the track belongs in one or more of the branches, and, for each branch in which the track belongs, filing the track under one or more subcategories."

Accordingly, in view of the remarks above, it is submitted that claim 9 is also allowable.

Claim 6, as amended, reads as follows:

"6. A method, performed by a processor in a digital media player, for filing media tracks, stored on a computer-readable medium, under categories in a tree structure, with each media track having attribute data identifying attributes of the track associated therewith, the attribute data including category name data, said method comprising:

upon startup or when a track is added or changed, searching the attributes of each track; and

for each track, automatically **filing the track by category name** under each selected category associated with the attributes to form an hierarchical track filing scheme."

Claim 6 includes the limitation of "for each track, automatically **filing the track by** category name under each selected category associated with the attributes to form an hierarchical track filing scheme." This limitation is also not described or even suggested in Grewe that files tracks sequentially track-by-track. The filing system of Grewe merely appends each individual header 36 to the last individual header 36 in the table of contents 34 so that tracks having a common category field 40 or a common artist field 42 are **dispersed** (see

Figures 3 and 4). Grewe does not describe, or even suggest, "for each track, filing the track by category name under each selected category" as claimed in claim 6.

In view of the above it is submitted that claim 6 is allowable and, as claims 7 and 8 are dependent upon claim 6, they are also allowable.

Claim 10, as amended, also includes the limitation of, for each track, "automatically filing the track by category name under each selected category to form an hierarchical track filing scheme." Accordingly, in view of the remarks above, it is submitted that claim 10 is also allowable.

Claim 11 reads as follows:

"11. A method of arranging media information relating to media tracks stored on a computerreadable medium, the method comprising:

reading a media definition file that includes a plurality of categories, wherein each category groups tracks having corresponding attributes associated with the media tracks; and for each track,

identifying a plurality of attributes associated with the track; identifying a category associated with each attribute; and

grouping the track within each category that has been identified."

Claim 11 includes the limitation of "reading a media definition file that includes a plurality of categories, wherein **each category groups tracks having corresponding attributes** associated with the media tracks." This limitation is also not disclosed in Grewe that merely arranges tracks in a sequential order resulting category fields 40 and artist fields 42 that are **dispersed** and not grouped as claimed in claim 11.

The above limitation in claim 11 must also be read in conjunction with the grouping operation performed for each track. In particular, claim 11 includes the limitation of, for each track, "grouping the track within each category that has been identified." Grewe does not

group tracks within a category but merely identifies a category associated with the track. Further, the category field 40 and artist field 42 are dispersed in Grewe.

In view of the above it is submitted that claim 11 is allowable. As claims 12-20 are dependent upon claim 11, they are also allowable.

Claim 21 reads as follows:

"21. A method of displaying media information on a display screen, the media information relating to media tracks stored on a computer-readable medium, the method comprising:

retrieving display data for display on the display screen from a media definition file that includes a plurality of categories, each category corresponding to an attribute associated with the media tracks, the display screen layout being based on the plurality of categories; and

for each track, displaying the track under each category with which it is associated."

Grewe does not even mention that information can be displayed on a display screen. Accordingly, Grewe does not describe or even suggest the limitations of a "display screen layout being based on the plurality of categories; and for each track, displaying the track under each category with which it is associated."

In view of the above it is submitted that claim 21 is allowable and, as claim 22 is dependent upon claim 21, it is also allowable.

Claim 23 reads as follows:

"23. A method of arranging media information relating to media tracks stored on a computer-readable medium, the method comprising:

identifying a plurality of attributes associated with a media track;

identifying at least two categories, each identify category corresponding to an attribute; and

providing a link to the track in each of the categories identified to provide a plurality of links in each category that identifies a plurality of tracks associated with the category."

The limitation of "providing a link to the track in each of the categories identified to provide a plurality of links in each category that identify a plurality of tracks associated with the category" is not described or even suggested in Grewe. Accordingly, claim 22 is also allowable.

In light of the above, Applicants respectfully submit that the rejection under 35 U.S.C. § 102 has been also been overcome, and withdrawal of this rejection is therefore respectfully requested.

3. Conclusion

Having tendered the above remarks and amended the claims as indicated herein, Applicants respectfully submit that all rejections have been addressed and that the claims are now in a condition for allowance, which is earnestly solicited.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of the present application, the Examiner is invited to contact Garth Vivier at (408) 947-8200 ext. 245.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAPMAN LLP

Dated: <u>//29</u>, 200

Mark Vatuone Reg. No. 53,719

12400 Wilshire Blvd. Seventh Floor Los Angeles, CA 90025-1026 (408) 947-8200



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.: 6407P212

2110104

In Re the Application of:

RON GOODMAN, ET AL.

Application No.: 09/755,723

Filed: January 5, 2001

For:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Art Group: 2175

Examiner: Rones, Charles

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FEB 0 5 2004

Technology Center 2100

PETITION FOR EXTENSION OF TIME PURSUANT TO 37 C.F.R. § 1.136(a)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F. R. § 1.136(a), Applicants for the above-identified application respectfully Petition the Commissioner for a one (1) month extension of time, extending the period for response to February 03, 2004, from the Advisory Action dated November 17, 2003. The petition filing fee of \$110.00 and a Request for Continued Examination are attached.

If it should be determined that a longer extension of time is required to prevent this application from being abandoned, please charge any additional fees to Deposit Account No. 02-2666. A copy of the Fee Transmittal is enclosed for deposit account charging purposes.

Respectfully submitted,

Blakely, Sokoloff, Taylor & Zafman LLP

Mark R. Vatuone, Reg. No. 53,719

12400 Wilshire Boulevard, 7th Floor Los Angeles, CA 90025 Telephone: (408) 947-8200

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/755,723	01/05/2001	Ron Goodman	017002022500	3728	
8791 7	590 03/30/2004		EXAM	INER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR			RONES, CHARLES		
LOS ANGELES, CA 90025		ART UNIT	PAPER NUMBER		
			2175	17	
			DATE MAILED: 03/30/2004	4	

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

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	Application	No.	Applicant(s)	/P
•	09/755,723		GOODMAN ET AL.	
Office Action Summary	Examiner		Art Unit	
	Charles L. Ro	ones	2175	
The MAILING DATE of this communication ap	pears on the co	over sheet with the c	orrespondence addr	ess
Period for Reply	. V IO OET TO	EVDIDE (MONTH)	(O) 500M	
A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reg - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the mailinearned patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, ply within the statutor d will apply and will ex te, cause the applicat	however, may a reply be tim y minimum of thirty (30) day: pire SIX (6) MONTHS from ion to become ABANDONE	nely filed vs will be considered timely. the mailing date of this commodities. D (35 U.S.C. § 133).	munication.
Status				
1) Responsive to communication(s) filed on 03 I	February 2004.			
2a) This action is FINAL . 2b) ⊠ Thi	is action is non	-final.		
 Since this application is in condition for allowa 	ance except for	formal matters, pro	secution as to the m	nerits is
closed in accordance with the practice under	Ex parte Quay	<i>le</i> , 1935 C.D. 11, 45	53 O.G. 213.	
Disposition of Claims				
4) Claim(s) 1-4 and 6-23 is/are pending in the a	pplication.			
4a) Of the above claim(s) is/are withdra	awn from consi	deration.		
5) Claim(s) is/are allowed.				
6) Claim(s) is/are rejected.				
7) Claim(s) is/are objected to.				
8) Claim(s) <u>21 and 22</u> are subject to restriction a	and/or election	requirement.		
Application Papers				
9)☐ The specification is objected to by the Examin	ier.			
10) The drawing(s) filed on is/are: a) ac	cepted or b)□	objected to by the F	Examiner.	
Applicant may not request that any objection to the	e drawing(s) be h	neld in abeyance. See	e 37 CFR 1.85(a).	
Replacement drawing sheet(s) including the corre	ction is required	if the drawing(s) is obj	jected to. See 37 CFR	1.121(d).
11)☐ The oath or declaration is objected to by the E	xaminer. Note	the attached Office	Action or form PTO	-152.
Priority under 35 U.S.C. § 119				
12) Acknowledgment is made of a claim for foreig	n priority under	· 35 U.S.C. § 119(a))-(d) or (f).	
a) ☐ All b) ☐ Some * c) ☐ None of:				
1. Certified copies of the priority documer	nts have been r	eceived.		
2. Certified copies of the priority documen	nts have been r	eceived in Applicati	on No	
3. Copies of the certified copies of the price	ority document	s have been receive	ed in this National St	tage
application from the International Burea	au (PCT Rule 1	7.2(a)).		·
* See the attached detailed Office action for a lis	t of the certified	d copies not receive	ed.	
Attachment(s)				
1) Notice of References Cited (PTO-892)	4)			
Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08	3) 5)	Paper No(s)/Mail Da Notice of Informal P	ate Patent Application (PTO-1	52)
Paper No(s)/Mail Date .		Other: Restriction/E		,

U.S. Patent and Trademark Office PTOL-326 (Rev. 1-04)

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Claim1-4,6-20, and 23, drawn to a method/computer program for filing media tracks, classified in class 707, subclass 7.
- Claims 21-22, drawn to a method of displaying on a display screen,
 classified in class 707, subclass 526.

The inventions are distinct, each from the other because of the following reasons:

Inventions in Group I and Group II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because a method of filing media tracks and a method of displaying are distinct and does not require the particulars of the other. The subcombination has separate utility such as method of filing and a displaying.

Application/Control Number: 09/755,723

Art Unit: 2175

Page 3

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Conclusion

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Rones whose telephone number is 703-306-3030. The examiner can normally be reached on Monday-Thursday 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Application/Control Number: 09/755,723

Art Unit: 2175

Page 4

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles L. Rones Primary Examiner Art Unit 2175

March 29, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



PATENT

In re application of: Goodman, et al

Application No.: 09/755,723

Filed: January 5, 2001

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Attorney Docket No.:

6407P212

Examiner: Rones, Charles L. CEIVED

Group: 2175

MAY 0 6 2004

Technology Center 2100

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Commissioner for Patents, Alexandria, VA 22313 on April 30, 2004.

Signed:

Faren Howe-Behrooz

Amendment and Response to Restriction Requirement

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

The enclosed remarks and amendments are submitted in response to the to the Office Action mailed on March 30, 2004 wherein a restriction requirement was imposed. Applicants respectfully request reconsideration of the captioned application in view of the following remarks and amendments. A listing of the claims commences on page 2. Remarks begin on page 6 of this paper.

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Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (withdrawn) A method, performed by a processor in a digital media player, for filing media tracks stored on a computer-readable medium, with each media track having attribute data for identifying attributes of the track, said method comprising:

reading a definition file that defines an ordered hierarchical tree structure having a plurality of branches, with the hierarchical tree structure including category names for naming-branches under which tracks are sorted, subcategory names for defining subcategories within the branches, and structure information defining the hierarchy of branch names and subcategory names; and

for each track, determining, based on the attribute data associated with the track if the track belongs in one or more of the branches, and, for each branch in which the track belongs, filing the track under one or more subcategories.

2-23. (cancelled)

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24. (new) A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks organized according to a file hierarchy, the file hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:

selecting a category in the first display screen of the portable media player; displaying the subcategories belonging to the selected category in a listing presented in the second display screen;

selecting a subcategory in the second display screen;

displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and

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accessing at least one track based on a selection made in one of the display screens.

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25. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory in the second display screen and playing a plurality of tracks associated with the selected subcategory.

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26. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory and adding the tracks associated with the selected subcategory to a playlist.

27. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting an item in the third display screen and playing at least one track associated with the selected item.

28. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises belecting an item in the third display screen and adding at least one track associated with the selected item to a playlist.

29. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises one of playing or adding to a playlist at least one track associated with a selected one of the category, subcategory, and item.

30. (new) The method of selecting a track as recited in claim 24 wherein the accessing at least one track is made after the presentation of the third display screen by reverting back to one of the second and first display screens, the second display screen presented sequentially/after the third display screen.

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31. (new) The method of selecting a track as recited in claim 24 further comprising selecting one of the items displayed in the third display screen and presenting

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a listing of items associated with the selected item in a fourth sequentially presented display screen.

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32. (new) The method of selecting a track as recited in claim 24 wherein the category genre is selected in the first display screen from available categories that include at least artist, album, and genre; and the subcategories listed in the second display screen comprise a listing of at least one genre type and one of the at least one genre type is selected.

33. (new) The method of selecting a track as recited in claim 3/2 further comprising displaying in the third display screen at least one album associated with the selected genre type and selecting one of the at least one albums displayed in the third display screen and presenting a listing of tracks associated with the selected album in a fourth sequentially presented display screen.

3/4. (new) The method of selecting a track as recited in claim 2/4 wherein the category artist is selected in the first display screen from available categories that include at least artist, album, and genre; the subcategories listed in the second display screen comprise a listing of names of artists and a first artist name is selected; and the items displayed in the third display screen comprises at least one album associated with the first artist name.

35. (new) The method of selecting a track as recited in claim 24 wherein the track is a music track the item accessed in the third display screen is a track title, and the track is played in response to the access.

36. (new) The method of selecting a track as recited in claim 24 wherein receipt of the selection in the first display screen results in an automatic transition of the first display screen into the second display screen and receipt of the selection in the second display screen results in an automatic transition of the second display screen into the third display screen.

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Amendments to the Specification:

The changes to the specification are included in the attached substitute specification, submitted pursuant to 37 CFR 1.125. Both a marked up version and a clean version are attached. The substitute specification does not include the currently pending claims, which are listed directly in a listing of claims in this paper.



Amendments to the Drawings:

New Drawings for Figures 9-14 are added. These are attached and correspond to drawings from patent application serial number 09/755.629, "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface", said application disclosure having been incorporated by reference in the original specification.



REMARKS

Claims 1-4 and 6-23 are pending in the application. The examiner had required restriction to one of the Group I and Group II inventions under 35 U.S.C. 121. In particular, the Examiner had indicated that the Group I inventions included claims 1-4, 6-20, and 23, drawn to a method/computer program for filing media tracks. The Examiner had further indicated that the Group II invention included claims 21-22, drawn to a method of displaying on a display screen.

Applicants hereby elect without traverse the claims of Group II, claims 21-22. The claims to the Group I invention have been either cancelled or withdrawn. In particular, claim 1 has been withdrawn and the remainder of the claims identified by the examiner to be associated with Group I, i.e., claims 2-4, 6-20, and 23 have been cancelled. Applicants reserve the right to submit the nonelected claims in a continuation or divisional application.

Further, Group II claims 21-22 have been cancelled. New claims 24-39 have been added, consistent with applicants' election of Group II. No new matter has been added. Applicants respectfully submit that new claims 24-36 fall within the classification of the elected Group II. Support for the new claims may be found throughout the original specification, including the matter incorporated by reference.

Applicants have further amended the specification to directly include matter from patent application serial number 09/755.629, "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface", said application disclosure having been incorporated by reference in the original specification. This matter is added via a substitute specification. The substitute specification adds no new matter. Clean and marked up copies are attached to this amendment. Applicants respectfully request that the substitute specification be entered pursuant to the provisions of 37 CFR 1.125.

Applicants have also submitted replacement drawings, FIGS. 9-14, attached hereto. Applicants respectfully request entry of the replacement drawings (new drawings). These drawings correspond to drawings which were a part of patent application serial number 09/755.629, "System for Selecting and Playing Songs in a

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Playback Device with a Limited User Interface", said application disclosure having been incorporated by reference in the original specification.

Applicants respectfully request entry of the amendments to the claims. The new claims correspond to the election to the invention of Group II in response to the restriction required by the Examiner in the office action of March 30, 2004. Support for the amendments may be found in the previous versions of the claims and the new drawings submitted including Figures 9 and 10 as well as the accompanying text, for example in pages 13-15 of the description. Applicants submit that the amended claims, including independent claim 24 and dependant claims 25-36, are patentable over the art of record for at least the reason that Grewe doesn't teach or suggest displaying categories or subcategories in a display screen.

Conclusion

Accordingly, it is submitted that all issues in the Office Action have been addressed. Applicants believe that this application is in condition for allowance, and respectfully request a prompt passage to issuance. If the Examiner believes that a telephone conference would expedite the prosecution of this application, he is invited to contact the Applicants' undersigned attorney at the telephone number set out below.

Respectfully submitted,

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USSN: 09/755,723

STITUTE SPECIFICATION- MARKED UP VERSION

Attorney Docket No.: 17002-022500US

Client Reference No.: CT-1139

PATENT APPLICATION

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

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Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

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CROSS-REFERENCES TO RELATED APPLICATIONS

CR 11-16-04

This application is related to Application No. <u>09/755,629</u>, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," <u>now abandoned (Atty. Docket No. 17002-020800)</u>; and Application No. <u>09/755,367</u>, entitled "Audioplayback Device with Power Savings Storage Access Mode," <u>issued as U.S. Patent No. 6,590,730 (Atty. Docket No. 17002-022400)</u>, all filed January 5, 2001, the disclosures of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

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Today, portable consumer electronic devices are more powerful than ever. For example, small, portable music playback devices can store hundreds, even thousands, of compressed songs and can play back the songs at high quality. With the capacity for so many songs, a playback device can store many songs from different albums, artists, styles of music, etc.

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Music jukeboxes implemented in software executed by a digital computer and portable MP3 and CD players both provide facilities for forming playlists. For example, the **OOZIC** player, distributed by the assignee of the present application, runs on a host PC and has a playlist feature that allows selection of tracks from the PC's hard disk to be included in the playlist.

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As storage capacity increases and songs are compressed to shorter file lengths the number of songs that can be stored increases rapidly. Major problems facing the consumer are organizing and accessing the tracks.

Typically, portable devices have a user interface including a small screen and buttons. Such a display screen might be, e.g., 1" x 2". This small display size is necessary because of the physical size of the device which is typically carried in the hand. The small size also limits the number, size, shape, and types of user input controls that can be mounted on the

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device. For example, a few pushbuttons are usually provided to perform all of the device's control functions. Using such a compact user interface to navigate and select among hundreds of songs is inefficient and often frustrating. The display screen can only show a few song titles at one time, and the limited controls make it difficult for a user to arbitrarily select, or move among, the songs.

The creation of playlists is one technique to organize the playing of songs. A set of songs can be included in a playlist which is given a name and stored. When the playlist is accessed, the set of songs can be played utilizing various formats such as sequential play or shuffle.

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However, the creation of playlists itself becomes problematic as the number of songs increases, since the user often arbitrarily selects songs from a large number of tracks to form a playlist. This selection mechanism: can be fairly tedious; does not necessarily produce playlists that are of interest to the user over the course of time; may not remain up-to-date if new songs are added that logically fit into a previously created playlist (e.g. "Favorites by Band X" might become out of date if a new favorite by Band X is added after the playlist was created); and leads to "lost" songs that are not members of any playlist.

Accordingly, improved techniques for organizing and grouping tracks useful in a portable music player are needed. <u>Further, it is desirable to provide a user interface suitable for a small device</u>. The user interface should allow a user to efficiently navigate among, and select from, many items stored in the device.

SUMMARY OF THE INVENTION

The present invention provides an efficient user interface for a small portable music player. The invention is suitable for use with a limited display area and small number of controls to allow a user to efficiently and intuitively navigate among, and select, songs to be played. By using the invention, very large numbers of songs can be easily accessed and played.

One aspect of the invention includes an overlapping hierarchy of categories.

Categories include items that can also be included in other categories so that the categories

"overlap" with each other. Thus, a song title can be accessed in multiple different ways by

starting with different categories. For example, a preferred embodiment of the invention uses the

top-level categories "Albums", "Artists", "Genres" (or styles), and "Play Lists". Within the Albums category are names of different albums of songs stored in the device. Within each album are the album tracks, or songs, associated with that album. Similarly, the Artists category includes names of artists which are, in turn, associated with their albums and songs. The Genre category includes types of categories of music such as "Rock", "Hip Hop", "Rap", "Easy Listening", etc. Within these sub-categories are found associated songs. Finally, the "Play Lists" category includes collections of albums and/or songs which are typically defined by the user.

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Advantageous use is made of the overlapping hierarchy to allow the user to quickly designate a song for playback. The device uses three "soft" pushbuttons that have assignable functions. The interface maintains consistent button functionality whenever possible and uses uniform command names and operations on different types of items so that the interface is more intuitive. For example, the user can open and queue both albums and songs with predictable results.

The interface also provides for multiple functions for a single control. For example, a "Play" button can act, in a first function, to play a currently-selected song. The Play button can act, in a second function, to cycle through different playback modes. The modes can be, e.g., (1) playback of songs from a hard disk; (2) playback of music from a radio receiver built into the device; and (3) playback of voice messages. The first function for the Play button can be activated by momentarily depressing the Play button for a short period of time. The second function is invoked by depressing the Play button for a longer period of time whereupon the device cycles through the different modes. Other ways of invoking the functions are possible such as where the second function is automatically entered from a powered-down state.

In one embodiment, the invention provides a method for selecting songs to be played in an electronic audio device, wherein the device includes a display and one or more user input controls, wherein songs are organized into categories, albums, wherein songs and albums are associated with artist names. The method includes steps of displaying categories on the display; accepting signals from a user input control to select a category; displaying one or more songs in the selected category on the display; accepting signals from a user input control to select a displayed song; and entering selected songs into a playlist queue, wherein the device plays back songs in the playlist queue.

According to one aspect of the present invention, a technique is provided for organizing tracks on a portable music player by automatically filing tracks in a hierarchical order based on attributes of the tracks.

According to another aspect of the invention, metadata is associated with each track that is used to automatically define the track's appropriate place in the hierarchy.

According to another aspect of the invention, the hierarchy is displayed on the portable music player so that a user can traverse the organizational hierarchy to find individual tracks or find playlists composed of logical groups of tracks.

According to another aspect of the invention, the hierarchy is derived by using metadata associated with the audio content that was obtained through any source of metadata (e.g. CDDB metadata, id3v2 metadata, other obtainable metadata) and subsequently stored with or alongside the file that stores the track.

According to another aspect of the invention, a file is formatted so that an unaltered track is stored as file data and information about the track is stored in file attribute files.

Other features and advantages of the invention will be apparent in view of the following detailed description and appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic diagram of a tree structure for hierarchical filing of tracks;

Fig. 2 is a definition file that specifies the hierarchy depicted in Fig. 1;

Fig. 3 is a user's view of the hierarchy;

Fig. 4 is a schematic diagram of a user interface displaying the hierarchical

25 category structure;

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Fig. 5 is a diagram of a file format for storing filed data and file attributes;

Fig. 6 is a flow chart depicting steps for filing tracks according to the hierarchical tree structure;

Fig. 7 depicts a tree resulting from searching the tracks; and

Fig. 8 depicts a format for a user interface[[.]];

Fig. 9 illustrates the NOMAD Jukebox and its user interface controls;

Fig. 10 illustrates a sequence of display screens describing how to navigate to

lower levels;

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Fig. 11 illustrates associations among items;

Fig. 12 shows display screens used to search for a song or other item;

Fig. 13 illustrates details of different items; and

Fig. 14 illustrates a playback device coupled to a host computer system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of the invention will now be described in the context of a portable personal player that plays audio files stored in memory. The files may be in MP3, wav. or other digital formats.

In the presently described embodiment, users are able to see the tracks on their player in some organized fashion other than as a single list of tracks. As will be described in more detail below, in one embodiment tracks are sorted utilizing a tree structure having branches labeled according to types of metadata associated with the tracks

For example, a track recorded as "Golden Slumbers" by the Beatles that appears on their album "Hey Jude" might appear as a track under the album "Abbey Road" as well as a track under the list of tracks by the Beatles. It might appear as a track under the genre "Pop Rock" as well as "Songs from the 60's." Furthermore, the organization can have more complex hierarchies. For example, the category of "Pop Rock" might contain subcategories "British Musicians," "American Musicians" and "Other Musicians". In all cases, the track is automatically filed into all appropriate locations without requiring user interaction.

In the currently defined embodiment, a tree structure is defined by a file having the following structure.

The first line of a TreeDef.inf file contains a version number:

V1.0

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Each subsequent line (at least in v1.0) contains lines of the following format: CATEGORY_NAME|TRACK_TYPE_MASK|CATEGORY_STRUCTURE

CATEGORY_NAMEs are the top-level names of the branch under which tracks are sorted. They include things like "Album," "Artist," "Voice Tracks," "All Tracks," etc.

TRACK_TYPE_MASKs tell which types of tracks are to be filed under this particular branch. The actual value is a hexadecimal numerical value (in '0x' format, e.g. 0x01) generated by ORing the following flags together as appropriate:

```
enum tTrackType
{

kTTNothing=0x00,
```

```
kTTSong=0x01,
kTTVoice=0x02,
kTTBook=0x04,
kTTMacro=0x08,
kTTPlaylist=0x10
};
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So, for example, the "Album" branch has a TRACK_TYPE_MASK of kTTSong, because only songs are filed under that branch, but the "All Tracks" branch has a TRACK_TYPE_MASK of (kTTSong | kTTVoice | kTTBook).

Other elements might be added to tTrackType (e.g. kTTVideo) as appropriate.

CATEGORY_STRUCTUREs tell how to file the songs based on their metadata information. The CATEGORY_STRUCTURE is a string of characters that tell, from left to right, the order of hierarchy. The characters come from the following enum constants:

```
enum tFileTag

{

kFTNone='@',

kFTTrackType='T',

kFTTitle='N',

kFTAudioFile='F',

kFTArtist='M',

kFTAlbum='L',

kFTGenre='G',

kFTSource='S',

kFTYear='Y',

kFTArtistCountry='C'

};
```

Thus, a CATEGORY_STRUCTURE of LN tells to create a subcategory that is a list of Albums, each of which contains a list of Tracks.

In total, a line like:

Album|0x01|LN

Says to create a branch called "Album" which contains tracks of type kTTSong organized first by album name, and then by track name.

The following is an example of a tree definition file similar (though not identical) to the hierarchy presented in the Nomad Jukebox product (the 'B' before each FileTag was used to identify that these are basic tags so that we wouldn't run out of letters in the alphabet as we included more complex metadata – thus each group of two letters represents a level in the hierarchy):

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V1.0

Album|0x01|BLBN

Artist|0x01|BMBN

Genre|0x01|BGBN

Voice Tracks|0x02|BSBGBN

Playlists|0x10|BN

Macros|0x08|BN

All Tracks|0x07|BN

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Fig. 1 depicts a hypothetical organization hierarchy. The tree shows how tracks might be listed (as leaves in the tree) after having been organized. Example values for nodes in the tree are shown as well. The same track may appear more than once as a leaf in the tree, as described above, if it fits into multiple categories (e.g. a song that appears on the Abbey Road branch would also appear in the Beatles branch). In the example shown, the first branch contains tracks organized by album. As shown in the example, this music collection contains three tracks from "Abbey Road" and three tracks from "Hits from the 60's". The second branch contains tracks organized by artist, and sub organized by where the artist is from. Thus, a user browsing would first select the "Artists" branch and then choose between "British Artists" and "American Artists". Finally, they would select the particular artist. In the third branch, all tracks are shown.

The tree definition file that would specify the hierarchy shown in Figure 1 is shown in Figure 2.

The first line identifies the version of the tree definition file.

The second line defines the "Albums" branch. The first part of the line, "Albums" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BLBN," defines that the branch lists first the names of all albums (BL) and then tracks on those albums (BN).

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The third line defines the "Artists" branch. The first part of the line "Artists" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BCBMBN," defines that the branch lists first the names of all countries where artists in this collection come from (BC) and under those items, the artists' names (BM), and then tracks by those artists (BN).

Fig. 3 shows what a user's view of this hierarchy might be if he/she were shown a fully expanded view of the 6-song tree. Notice that each song appears three times, once in each branch.

In consumer products the tree define file is not edited directly but through a user interface, one example of which is depicted in Fig. 4. An example of a user interface for viewing songs by category and editing the tree structure is depicted in Fig. 4.

An embodiment of the invention is utilized in the Nomad® Jukebox, manufactured by the assignee of the present invention, and described more fully in the copending application, filed on the same date as the present application, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Attny. Docket No. 17002-020800).

In a preferred embodiment, metadata is associated with each track and includes such information as title, genre, artist name, type, etc. In the preferred embodiment, software stored in a portable player and executed by the onboard processor automatically files each track in the correct category utilizing the associated metadata and the tree define file. The program code can be stored in any computer readable medium including magnetic storage, CD ROM, optical media, or digital data encoded on an electromagnetic signal.

Thus, the user is automatically provided with a powerful and flexible tool for organizing and categorizing the tracks stored on the portable player.

If the tracks are formatted in MP3 format the metadata can be stored in ID3 tags included in the MP3 file. In one embodiment of the invention, the tracks are stored in alternate

file format including file data and file attributes. The file data is the music track itself and the file attributes part of the file includes fields of arbitrary size which are used to store metadata characterizing the track stored as the file data. Again this metadata includes information about the track such as title, genre, artist name, type, etc.

There are several advantages to using the alternate file format. Metadata of types not easily included in an ID3 tag can be utilized. Further, the original track format is not changed, so that error correction data such as checksums are valid. Finally, any file format can be used (e.g. WAV, WMA, etc.) because the metadata is stored separately, and thus audio formats that have limited support for metadata can still be stored on the portable player in native format without transcoding. The formatted files are formed by software stored in the portable music player and executed by an on-board processor.

The metadata for each track is utilized to file each track, using the categories defined in the hierarchical structure as described above, without any input from the user.

Fig. 5 is a schematic diagram of the alternative file format including file data in the form of an MP3 track, and metadata fields for holding data indicating the name of the album the track is from, the name of the song, the genre of the song, and the type of track.

A particular embodiment of a file format will now be described. All tracks are created with some set of attributes as shown below:

20 <u>Definition of TrackInfo Data Field</u>

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F:-14	Official	G:	Description of the second of t
Field	Offset	Size	Description
Attribute Count	0	2	The number of attribute follow for the track
Attr 1 type	2 .	2	Binary = 0, ASCII = 1
Attr 1 name len	4	2	Length of attribute name string
Attrl data len	6	4	Length of attribute data
Attr1 Name	10	N	Attribute name string
Attr 1 Data	10+N	M	Attribute data

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••••				
Attr N type				
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Attrl Name				
1.0				
Attr 1 Data				

Required Attributes

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Attribute Name	Value(s)	Remarks
TITLE	ASCII string	Required By Jukebox
CODEC	"MP3", "WMA", "WAV"	Required By Jukebox
TRACK ID	DWORD	Set By Jukebox
ALBUM	ASCII string	Optional
ARTIST	ASCII string	Optional
GENRE	ASCII string	Optional
LENGTH	In seconds	Optional
TRACK SIZE	In bytes	Optional
TRACK NUM	1-n (track within album)	Optional

These attributes can be subsequently changeable via a host application, running on a personal computer connected to the portable music player.

Fig. 6 shows a flow chart of an embodiment the process used to build the hierarchical database of tracks. It starts by iterating through each track, and, for each track, iterating through each branch to find if the track belongs on the branch, and, if so, where. In this case, the term track could refer to any content, e.g. a music track, a spoken word track, or even a video track.

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Also, the hierarchical catalog of tracks can be used to form playlists in a structured manner. For example, if a user wants to hear Jazz and Blues the entire sub-categories can be selected to form one playlist.

An alternative hierarchical catalog generation technique will now be described.

In this alternative embodiment, at system startup and as tracks are added or changed, the hierarchy is generated as an in-memory tree structure. Each track is added to the tree using the categories ALBUM, ARTIST and GENRE.

The following example shows the algorithm for adding a track. For clarity, only the attributes used by the tree are shown.

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TITLE	"Free Falling"
ALBUM	"Full Moon Fever"
ARTIST	1.1.11111
	"Tom Petty"
GENRE	"Rock"
TRACK NUM	1

The following function is executed to build the in-memory memory tree.

Build Tree ()

15 For each track,

Add Track To Category(Album, Track)

Add Track To Category(Artist, Track)

Add Track To Category(Genre, Track)

End of Build Tree

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Fig. 7 depicts a tree which could result from implementing Build Tree() function. Note that "Stardust" does not have any entries for Album or Artist. The host software running on a computer connected to the portable music player could be utilized to add missing attributes to the "Stardust" track and, optionally, edit the title attribute. The Build Tree() function would then reinsert this track in the correct location in the tree.

Fig. 8 is an embodiment of a user interface according to another embodiment of the invention. In this example the root node is labeled "My Configuration" and the Playlist category has been selected and the Playlist subcategory "Meddle" has been selected. Note that the types of Metadata, in this example, Track Name, Artist, Album, Tempo and

Dance, are listed across the top of the screen, and the attribute values for each track are listed in a row across the screen. Various control buttons are displayed to the right of configuration window that facilitate quickly invoking selected processing on a selected track.

As noted above, a preferred embodiment of the present invention is incorporated into a product manufactured and distributed by Creative Technology, Ltd. The product is called the "NOMAD Jukebox." The following description describes further details of the display screens and interface controls.

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Fig. 9 illustrates the NOMAD Jukebox and its user interface controls.

In Fig. 9, electronic audio device 100 measures about 5.5" wide by 5.5" tall by 1" thick. Display screen 102 is about 2" wide by 1" tall. Display screen 102 includes different regions such as main region 104 and soft button function description region 106.

Three soft buttons are located at 108; including buttons 110, 112 and 114. The specific command, or function, that any of the soft buttons perform when depressed is indicated by the label in soft button function description region 106. Thus, the function of soft button 112 (as shown in Fig. 9) is "open," the function of soft button 114 is "search" while soft button 110 is currently not assigned a function.

The other eight buttons on device 100 perform essentially the same functions at all times. In other words, they are not subject to function changes according to soft button function description area 106. These buttons include Library button 116, EAX and System button 118, Skip Backward button 120, Play button 122, Stop button 124, Skip Forward button 126, Scroll Up button 128 and Scroll Down button 130. However, as discussed below, these buttons (or any type of controls used with the device) can include alternate functionality that is invoked in different ways.

The device uses visual cues, or indicators, in the display. When an item is highlighted it indicates that the item is the "current" item, or currently-selected item, which is susceptible to be operated on by a subsequent user action – such as playback, or expansion of the item. In Fig. 1, screen 102 shows that the item, "ALBUMS," is highlighted. The highlighted

item can be acted upon by using the soft buttons, or another button, as discussed below. The current item can be changed by using Scroll Up button 128 and Scroll Down button 130 to move the highlight up or down, respectively, throughout a list of displayed items.

Icons are used to provide additional visual cues for an item. In Fig. 1, each of the categories has a category icon to the left of it. The category icon, which may not be distinctly visible in the Figure, illustrates a first box connected by lines to additional boxes below the first box. The icon depicts a hierarchy and illustrates the property of categories, i.e., that categories can contain additional categories, songs or other items.

Fig. 10 illustrates a sequence of display screens describing how to navigate to lower levels.

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In Fig. 10, library category screen 150 shows the display as it appears when the user depresses library button 116 of Fig. 9. A preferred embodiment of the device uses 4 first-level categories. These are "Albums", "Artists," "Styles" and "Play Lists". Each of these categories can "contain," or be associated with, other categories, songs, or items.

Note that in library category screen 150 ALBUMS is currently highlighted. By depressing soft button 112 of Fig. 9, the "open" command is performed on the highlighted category, as indicated by the labeling of soft button 112 and soft button function description area 152 of Fig. 10.

Lists screen 154 is displayed as a result of a user opening the Albums category of library category screen 150. Lists screen 154 shows items within the Albums category such as commercial albums of multiple songs from a record label, pre-made lists or collections created by a user, or other predefined lists or collections of songs or recordings.

In Fig. 10, lists screen 154 shows each item as a list of songs. This is shown visually by the icon to the left of each item which depicts a miniature list. Possible soft button commands are "Close", "Open" and "Queue". These commands correspond to soft buttons 110, 112 and 114, respectively. If the user selects the Close command, the display reverts to library category screen 150. If the user selects the Open command, the display shows tracks screen 156. Alternatively, the user can select the Queue command to instruct the device to place all the songs from the selected (i.e., highlighted) list into the play list for eventual playback. Yet another option allows the user to press play button 122 of Fig. 9 to cause any currently-selected songs or a list of songs (e.g., an album) to immediately be played.

Returning to Fig. 10, tracks screen 156 shows that a single song called "JukeBox Demo" is in the list. The list is also called JukeBox Demo as shown in lists screen 154. Tracks screen 156 shows possible soft commands assigned to buttons, namely "Close", "Details" and "Queue." The Close button performs the same function as before — it returns the user to the previous screen which, in this case, is lists screen 154. The user can also select the Details command to cause details of the song JukeBox Demo to be displayed in details screen 158 as shown in Fig. 10. The user can select the Queue command by soft button 114 to enter the selected song into the play list queue. As before, the user can also depress play button 122 of Fig. 9 to cause immediate playback of the selected song.

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Details screen 158 shows information about the selected song including the name of the song, album (or list) name containing the song; the track number, if applicable, and track duration. Note that other information can be included. The user can preview the song, close the Details screen to return to the Tracks screen or queue the song on the play list queue.

The device provides the ability to "preview" audio files even while a current song, or playlist, is being played. When a user chooses to preview an audio file, the audio file is played for about 10 seconds while any currently-played file or playlist is suspended. After previewing is complete, the suspended file or playlist resumes playback. In other embodiment, the preview duration can vary, or be stopped by user selection.

Fig. 11 illustrates associations among items.

In Fig. 11, song 168 is one of many songs stored in the device. Categories such as albums 160, artists 162, play lists 164 and genres 166 each include sub-categories. For example, albums 160 includes the names of various albums. Songs are associated with albums, genres and playlists. Such association can be by using pointers, a data structure including items to be associated, etc. "Association" as used herein, includes a first item associated with a second item; and the second item associated with the first item. In other words, albums can be associated with one or more songs in the database of the device so that an automated search to find all songs associated with an album is easier. The direction of arrow pointers in Fig. 11 is not intended to limit the manner of associations among items in the present invention.

Similar to albums, the category of artists 162 includes names of artists, or performers, of songs. Each artist name is associated with one or more songs in the database.

Playlists 164 includes names of playlists. These are collections of songs that can be defined by

the user, the device manufacturer, or others. Each playlist can be associated with one or more songs. Genres 166 includes various styles of music which are associated with one or more songs in the database. Note that items can exist without being associated with a song. Also, items can be associated with other items as where an artist name is associated with the albums containing the songs that the artist has created.

Although not shown in Fig. 11, items can have additional information, such as properties, details, etc., associated with the item. For example, a song can have information such as play time, artist name, artist album, copyright owner, etc., associated with the song.

Fig. 12 illustrates display screens used to search for a song or other item.

In Fig. 12, screen 180 is the initial library screen, as discussed above. If the user invokes the Search command (via the appropriate soft button) with Albums selected then screen 182 is displayed. Note that the search function can be applied to any of the categories. The user can depress the Plus or Minus soft buttons to cycle through the alphabet and change the character in the current location as indicated by the cursor. The cursor position is changed by using the scroll up/scroll down buttons 128 and 130, respectively, of Fig. 9. As each letter is entered the letters are compared and the nearest match of the stored albums' names is displayed as shown in screen 184. When the desired match is displayed the user selects the Go! command.

Screen 186 shows the result of selecting the Go! command. A list of albums is displayed with the matched album centered and selected. The user can close, open or queue the album as discussed above.

Fig. 13 illustrates details of different items.

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In Fig. 13, screen 200 illustrates details displayed as a result of selecting the "Details" command from soft button 1A track is selected. Screen 200 shows that details of the track "Jukebox Demo" shows the name of the album that the track resides on, the creator, or copyright owner, of the track, and the playing time of the track.

Screen 202 illustrates details of an item on the active queue list. Items are placed onto the active queue list by selecting the "Queue" command when an album, song, track, or other item is selected, as discussed above. For example, screen 204 shows the active queuelist where the track "Jukebox Demo" is selected. By invoking the "Details" command screen 202 is brought up to show details of the Jukebox Demo track.

As shown in screen 202, the Detail screen shows what track number the selected track is, which album the track is from; the creator, or copyright owner, of the track, and the title of the track. Additionally, the details for an item on the queue list also show playback settings.

These are shown by two-letter abbreviations at the bottom of the screen. The settings are as show in Table I, below.

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	Environmental Preset
<u>EA</u>	
	Parametric EQ
EQ	
	Headphone Spatialization
<u>HS</u>	
	Time Scaling
<u>TS</u>	
	Four Channel Speaker Sound
<u>4S</u>	(only if speakers are connected)

TABLE I

These settings have their common meanings, as is known in the art. Note that the setting 4S is not shown in screen 202 as it is not currently active.

Fig. 14 illustrates the Nomad Jukebox coupled to a host computer system.

In Fig. 14, device 300 (e.g., the Nomad Jukebox) is coupled to host system 302.

In a preferred embodiment host system 302 is a personal computer, such as an IBM-PC compatible computer. Host system 302 includes a user interface having display 304 and user input devices such as keyboard 306 and mouse 308. In other embodiments the host system need not be a full computer system. Any type of processing system having a user interface is possible. For example, it is possible to couple the device to a laptop computer, game console, web-enabled television, or any consumer electronic device or digital platform, in general. The host user interface need not provide a display and can be much more minimal than the keyboard and mouse shown in Fig. 14. A preferred embodiment of the invention uses a Universal Synchronous Bus (USB) connection but any type of connection such as IEEE 1394 (FireWire), Ethernet, Serial Port, etc. can be used. A wireless (i.e., optical or radio frequency) connection can be used.

Once device 300 is coupled to host system 302, a user of host system 302 can launch a bridge interface to allow for the transfer of files between device 300 and host system 302. In a preferred embodiment, once the bridge interface is launched, the controls of device 300 are inoperable. The user interface of host system 302 is used to operate the bridge interface to transfer files.

The invention has now been described with reference to the preferred embodiments. Alternatives and substitutions will now be apparent to persons of skill in the art.

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WHAT IS CLAIMED IS:



Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

ABSTRACT OF THE DISCLOSURE

A method, performed by software executing on the processor of a portable music playback device, that automatically files tracks according to hierarchical structure of categories to organize tracks in a logical order. A user interface is utilized to change the hierarchy, view track names, and select tracks for playback or other operations. The user interface uses an overlapping hierarchy of categories. A song title can be accessed in multiple different ways by starting with different categories. A preferred embodiment of the invention uses the top-level categories "Albums", "Artists", "Genres" (or styles), and "Play Lists". Within the Albums category are names of different albums of songs stored in the device. Within each album are the album tracks, or songs, associated with that album. Navigation is performed by presenting a sequence of display screens for each level of the hierarchy.

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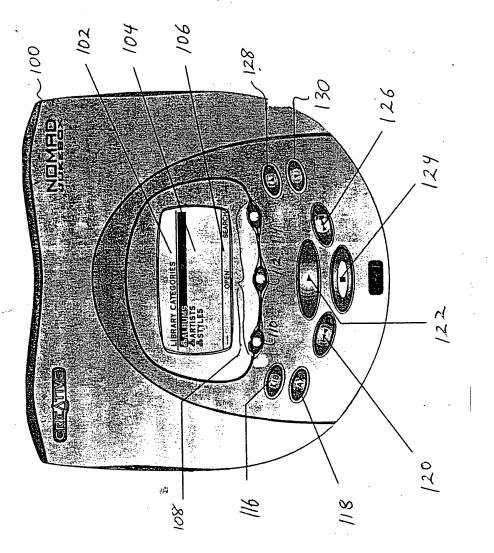


Fig. 9

FEPLA

тактыруу Овикстий

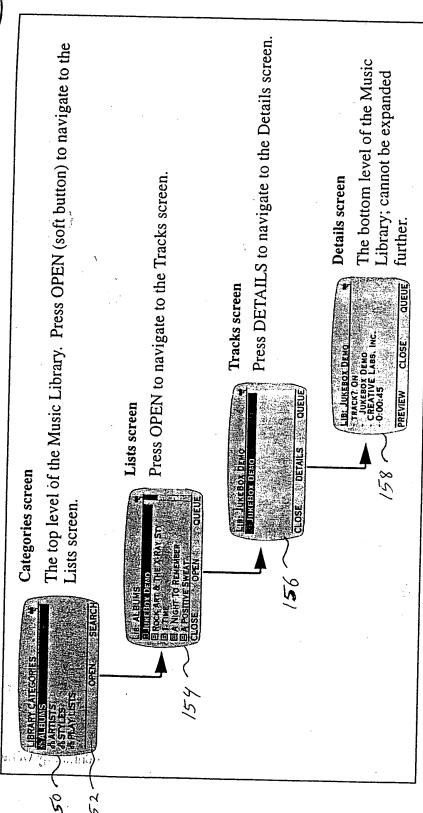
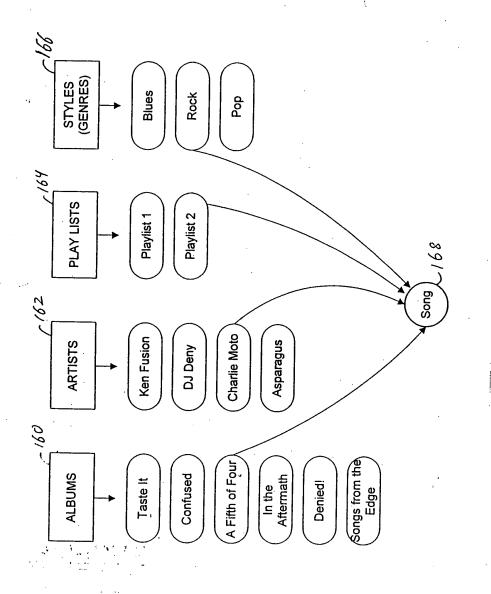


Fig. 1

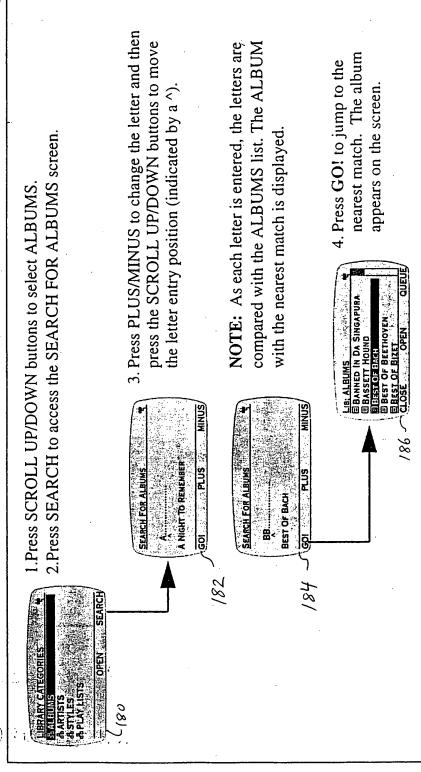


Phillips States



rig. 11





Fia. 12



Album together with Audio Playback settings (see note below) and Play Mode 2. Press BACK to return to the ACTIVE QUEUE LIST screen. 1. Press DETAILS. The DETAILS screen displays the Track Title, Artist, and 1. Press DETAILS. The DETAILS screen displays the Track Order, Album, 2. Press CLOSE to return to the TRACKS screen. Viewing DETAILS accessed from the ACTIVE QUEUE LIST screen: (see "Setting Play Mode" on page 16). Artist, and duration of the track. View DETAILS accessed from the TRACKS screen: 007. 707~ MODE PREVIEW CLOSE SEROUEUE PLAY: TRACK 1 OF 1 0.05 JUKEBOX DEMO CREATIVE LABS, INC. JUKEBOX DEMO LIB: JUKEBOX DEMO BACK SAVE STOP 5 TRACKS READY

JUNKABOX DAMO

O'DON' ADAM—TRAFIC JAM

O'RICK NELSON - GARDEN PARTY

DETAILS COLLAPSE CLEAR-LIST ACTIVE QUEUELIST





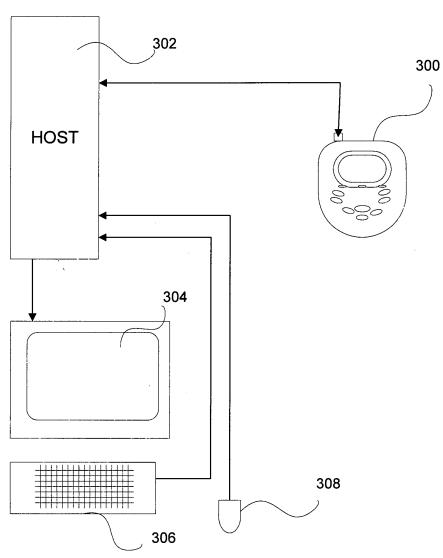


Fig. 14

The Roll of John 1916







IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Examiner:

RONES, Charles L.

GOODMAN, et al

Art Unit:

2175

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

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Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450 **Technology Center 2100**

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- () A statement pursuant to 37 C.F.R. §1.97(e) or
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Respectfully submitted,

Russell N. Swerdon Reg. No. 36,943

Date: 4.30.04

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Applicant claims small entity status. See 37 CFR 1.27

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RUSSELL N

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MAY 0 4 2004

Effe

09/755,723 pplication Number 01/05/2001 iling Date GOODMAN, Ron irst Named Inventor RONES, Cha Examiner Name 2175 Art Unit

Complete if Known

TOTAL AMOUNT OF PAYMENT (\$) 0 6407P212 Attorney Docket No METHOD OF PAYMENT (check all that apply) FEE CALCULATION (continued) Technology Money Order Other X None 3. ADDITIONAL FEES Large Entity , Small Entity Deposit Account: Fee Code Fee Fee Description Deposit (\$) Code Fee Paid 1051 130 2051 65 Surcharge - late filing fee or oath Number Deposit 1052 50 2052 25 Surcharge - late provisional filing fee or Account cover sheet Name 130 Non-English specification 1053 130 1053 The Director is authorized to: (check all that apply) 1812 2,520 1812 2,520 For filing a request for ex parte reexamination Charge fee(s) indicated below Credit any overpayments 1804 920 1804 920* Requesting publication of SIR prior to Charge any additional fee(s) or any underpayment of fee(s) Examiner action Charge fee(s) indicated below, except for the filing fee 1805 1,840* Requesting publication of SIR after Examiner action 1805 1.840 to the above-identified deposit account 1251 110 2251 55 Extension for reply within first month FEE CALCULATION 1252 420 2252 210 Extension for reply within second month 1. BASIC FILING FEE 1253 950 2253 475 Extension for reply within third month arge Entity Small Entity Fee Paid Fee Fee Code (\$) code (\$) Fee Description 1254 1.480 2254 740 Extension for reply within fourth month 1,005 Extension for reply within fifth month 1255 2.010 2255 1001 770 2001 385 Utility filing fee 1002 340 1401 330 2401 2002 170 Design filing fee 165 Notice of Appeal 1003 530 1402 330 2402 2003 265 Plant filing fee 165 Filing a brief in support of an appeal 1004 770 2004 1403 290 145 Request for oral hearing 385 Reissue filing fee 2403 1005 160 2005 1451 1,510 Provisional filing fee 1451 1,510 Petition to institute a public use proceeding 1452 110 2452 55 Petition to revive - unavoidable **SUBTOTAL (1)** (\$) 1453 1.330 2453 665 Petition to revive - unintentional 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE 1501 1.330 2501 665 Utility issue fee (or reissue) Fee Paid Extra Claims below 1502 480 2502 240 Design issue fee =0 **Total Claims** 0 x 18 1503 640 2503 320 Plant issue fee Independent 0 86 = 0 1460 130 1460 130 Petitions to the Commissioner Multiple Dependent 1807 50 1807 50 Processing fee under 37 CFR 1.17(a) Large Entity 1 Small Entity 180 1806 1806 180 Submission of Information Disclosure Stmt Fee Fee Code (\$) Fee Description Fee 40 Recording each patent assignment per Code (\$) 8021 40 8021 property (times number of properties) 1202 18 2202 Claims in excess of 20 385 Filing a submission after final rejection (37 CFR 1.129(a)) 1809 770 2809 1201 86 2201 Independent claims in excess of 3 43 1203 290 2203 145 Multiple dependent claim, if not paid 385 For each additional invention to be examined (37 CFR 1.129(b)) 1810 770 2810 1204 86 2204 Reissue independent claims 43 over original patent 1801 770 2801 385 Request for Continued Examination (RCE) 1205 18 2205 ** Reissue claims in excess of 20 1802 900 1802 900 Request for expedited examination and over original patent of a design application Other fee (specify) **(\$)** 0 SUBTOTAL (2) *Reduced by Basic Filing Fee Paid SUBTOTAL (3)

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EXAMINER

RONES, CHARLES

ART UNIT PAPER NUMBER

2175
DATE MAILED: 06/09/2004

[APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	09/755.723	01/05/2001	Ron Goodman	017002022500	3728

TITLE OF INVENTION: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$300	\$1630	09/09/2004

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Page 1 of 3

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APPLICATION NO.	FILING DATE	F	IRST NAMED INVE	NTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,723	01/05/2001		Ron Goodman		017002022500	3728
	UTOMATIC HIERARCHIC				TOTAL PERON DUE	DATE DUE
APPLN. TYPE	SMALL ENTITY	ISSUE FE		UBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330		\$300	\$1630	09/09/2004
EXAM		ART UNI	T C	LASS-SUBCLASS	_	
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been previously submitter (A) NAME OF ASSIGNI	an assignee is identified bel d to the USPTO or is being s EE	ow, no assignee da submitted under sep (B)	ata will appear on the arate cover. Complete RESIDENCE: (CIT	e patent. Inclusion of a	assignee data is only appropr T a substitute for filing an ass UNTRY)	iate when an assignment has signment.
Please check the appropriate	<u>-</u> <u>-</u>	`		individual •	corporation or other private g	roup entity 🚨 government
4a. The following fee(s) are	enclosed:		Payment of Fee(s):		-1d	
☐ Issue Fee ☐ Publication Fee			_	nount of the fee(s) is en t card. Form PTO-2038		
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Director for Patents is reques	sted to apply the Issue Fee an				(enclose an extra	
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This collection of informa obtain or retain a benefit in application. Confidentiality estimated to take 12 minut completed application for case. Any comments on suggestions for reducing the Patent and Trademark 22313-1450. DO NOT SEND TO: Commissioner	tion is required by 37 CFR by the public which is to fi vis governed by 35 U.S.C. I less to complete, including grm to the USPTO. Time will the amount of time you rhis burden, should be sent to Office, U.S. Department END FEES OR COMPLE for Patents, Alexandria, Virgina is to the power of the property	1.311. The inform le (and by the US) 22 and 37 CFR 1.1 athering, preparing, I vary depending require to complete to the Chief Inform of Commerce, Al TED FORMS TO ginia 22313-1450.	ation is required to PTO to process) an 4. This collection is and submitting the upon the individual e this form and/or nation Officer, U.S. exandria, Virginia THIS ADDRESS.			

TRANSMIT THIS FORM WITH FEE(S)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.









United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,723	01/05/2001	Ron Goodman	017002022500	3728
08791 7	590 06/09/2004		EXAM	INER
BLAKELY SOK	OLOFF TAYLOR &	RONES, CHARLES		
12400 WILSHIRE	BOULEVARD, SEVE	NTH FLOOR		
LOS ANGELES, O	CA 90025		ART UNIT	PAPER NUMBER
·		2175		

DATE MAILED: 06/09/2004

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 303 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 303 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.





14

Application No. Applicant(s) 09/755,723 **GOODMAN ET AL** Notice of Allowability Examiner Art Unit Charles L. Rones 2175 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. This communication is responsive to amendment filed May 4, 2004. 2. The allowed claim(s) is/are 24-36. 3. The drawings filed on <u>05 January 2001</u> are accepted by the Examiner. 4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some* c) ☐ None of the: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: . . Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) I including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) I including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application (PTO-152) 2. Notice of Draftperson's Patent Drawing Review (PTO-948) 6. Interview Summary (PTO-413), Paper No./Mail Date 3. Information Disclosure Statements (PTO-1449 or PTO/SB/08). 7. Examiner's Amendment/Comment Paper No./Mail Date 19 4. Examiner's Comment Regarding Requirement for Deposit 8. Examiner's Statement of Reasons for Allowance of Biological Material 9. Other _____. Charles L. Rones **Primary Examiner** Art Unit: 2175

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

Notice of Allowability

Part of Paper No./Mail Date 20

	for Form 1449	/PTO			Complete if	Known
OIP	MEOR	ΛΛΛ	TION DISCLOSUR	-	Application Number	09/755,723
	%\				Filing Date	01/05/2001
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L	<i>#</i>	(use as	many sheets as necessary)	Art Unit	2175	
TRADEWA	at G			Examiner Name	RONES, Charles L.	
Sheet	1		of	2	Attorney Docket Number	6407P212
			U.S. PATEN	T DOCUMENTS		
Examiner Initials*	Cite No.1	Numi	Document Number Der-Kind Code ² (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶		

Examiner	$\mathcal{L} \subset \mathcal{L}$	Date Considered	
Signature	Cillones		6-8-64

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Based on Form PTO/SB/08A (04-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03

Substitute fo	or Form 1	449/PTO			Complete if	Known	
150	INFO	RMATION	DISCLOSURE		Application Number	09/755,723	
DIFE	\				Filing Date	01/05/2001	
1	AI P		Y APPLICANT		First Named Inventor:	GOODMAN	, Ron
MAY 0 4 2004	8	(use as many shee	ets as necessary)		Art Unit	2175	
<u> </u>					Examiner Name	RONES, Cha	rles L.
Sheet	2	e of	2		Attorney Docket Number	6407P212	
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Examiner Initials*	Cite No ¹		the author (in CAPITAL LETTER magazine, journal, serial, sympos number(s), publisher, city ar	ium, cat	alog, etc.), date, page(s), volu		T ²
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Based on Form PTO/SB/08B (04-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03

ones

Examiner

Signature

6-8-04

Date

Considered

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'Applicant is to place a check mark here if English translation is attached.

Is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

The Property certify that this correspondence is being deposited with the United States Postal Service as Express Mail No. ER886552274US with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

July 9, 2004 Date of Deposit

Cynthia K. Dawn Name of Person Mailing Correspondence

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY **METADATA**

Applicant:

Ron Goodman

Filed:

January 5, 2001

TC/A.U.

2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT AND PETITION UNDER 37 C.F.R. § 1.48(c) TO CORRECT INVENTORSHIP

Dear Sir:

The undersigned hereby respectfully requests and petitions that the above-referenced application be amended under 37 C.F.R. § 1.48(c) to correct inventorship of the application.

The undersigned hereby respectfully requests and petitions that the above-referenced ation be amended under 37 C.F.R. § 1.48(c) to correct inventorship of the application.

The application was filed on January 5, 2001 naming the following persons as inventors present patent application: of the present patent application:

(1) Ron Goodman, a citizen of the United States, residing at 226 Jeter Street, Santa Cruz, CA 95060; and

(2) Howard N. Egan, a citizen of the United States, residing at 219 Elinor Street, Capitola, CA 95010.

Please correct and amend the present patent application so that David Bristow, a citizen of the United Kingdom, residing at 5988 NE Tolo Road, Bainbridge Island, WA 98110 is additionally named as a joint inventor of the present patent application.

It is respectfully submitted that the amendment is necessitated by amendment of the claims and that the error in inventorship of the present patent application was made without any deceptive intent by anyone, including the actual inventors.

Enclosed with this Amendment and Petition are the following documents:

(1) a verified Statement of Facts by David Bristow stating that the addition in inventorship of the present patent application is necessitated by amendment of the claims and that the inventorship error occurred without any deceptive intent on his part;

(2) an executed Declaration/Power of Attorney indicating all inventors; and

(3) an Assent of Assignee for Correction of Inventorship with a copy of the previously recorded Notice of Recordation of Assignment document.

The Assignment by the additional inventor, David Bristow, to be recorded in accordance with 37 C.F.R. § 1.33(1), and a check in the amount of \$40.00 to cover the recordation fee required by 37 C.F.R. § 1.21(h), are being forwarded separately to the Assignment Division.

Enclosed herewith is a check in the amount of \$130.00 in payment of the fee under 37 C.F.R. § 1.17(i) for correction of inventorship.

Respectfully submitted,

Dated: July 9, 2004

Russell N. Swerdon Reg. No. 36,943

2

Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

09/755,723

6407P212

ML 0 9 2004 By

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Thereby certify that this correspondence is being deposited with the United States Postal Service as Expressional addressed to the Commissioner for Patents. P.O. Box 1450. Alexandria. VA 22313-1450.

on array 9, 7004

Date of Deposit

Cynthia & Dawn

Name of Person Mailing Correspondence

Signature

Date

Date

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Applicant:

Ron Goodman

Filed:

January 5, 2001

TC/A.U.

2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

STATEMENT OF FACTS BY DAVID BRISTOW UNDER 37 C.F.R. § 1.48(c)

Dear Sir:

I hereby declare:

1. I am making this Statement of Facts under 37 C.F.R. § 1.48(c) in connection with U.S. Patent Application Serial No.09/755,723 filed January 5, 2001 (hereinafter referred to as "the present patent application").

- My current residence and country of citizenship is as follows:
 David Bristow, a citizen of the United Kingdom, residing at 5988 NE Tolo Road, Bainbridge Island, WA 98110.
- 3. The amendment in inventorship is made as necessitated by amendment of the claims. An inventorship error was made by naming only Ron Goodman and Howard N. Egan as joint inventors, rather than naming Ron Goodman, Howard N. Egan and David Bristow as joint inventors.
- 4. The inventorship error was made without any deceptive intent whatsoever on my part.
- It is now requested that the additional inventor David Bristow be added to the present patent application.

I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: July , 2004

David Bristow

To: +1-4089286699 Fage of 2

PATENT APPLICATION

DECLARATION FOR PATENTAL	AND POWER	OF	ATTORNEY
FOR PATENTAL	LICATION		

ATTORNEY DOCKET NO. 6407P212

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

the specification of which is attached hereto unless the following box is checked:

(X) was filed on January 5, 2001 as US Application Serial No. or PCT International Application

Number 09/755,723 and was amended on 4/30/2004 (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

· COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			· YES: NO:
			YES: NO:

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE

U.S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS(patented/pending/abandoned)

POWER OF ATTORNEY:

As a named inventor, I hereby appoint the practitioners associated with Customer No. 40032 as my patent attorneys, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Send Correspondence to:	Direct Telephone Calls To:
P. Francois de Villiers	
Customer No. 40032	Russell N. Swerdon
Creative Labs, Inc.	(408) 428-6600
1901 McCarthy Boulevard	• • • • • • • • • • • • • • • • • • • •
Milpitas, CA 95035	
I hereby declare that all statements made herein of my own knowledge at	e true and that all statements made on information and helief are helieved to be true; and first beauty

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Citizenship: UNITED STATES	
July 7 , 2004 Date	
	July 7 , 2004

Page 1

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (continued)			ATTORNEY DOCKET NO. 6407P212
Full Name of Inventor: <u>Howard N. EGAN</u>		_	Citizenship: UNITED STATES
Residence: 219 Elinor Street, Capitola, CA 95010 USA			
Post Office Address: Same	WA124 - 1		·
Inventor's Signature	<u>July</u> Date	, 2004	
			·
Full Name of Inventor: David BRISTOW		_	Citizenship: UNITED KINGDOM
Residence: 5988 NE Tolo Road, Bainbridge Island, WA 98110			
Post Office Address: Same	· · · · · · · · · · · · · · · · · · ·		
	July	, 2004	
Inventor's Signature	Date	1 2004	
·			
Full Name of Inventor:		_	Citizenship:
Residence:			
Post Office Address:		·	
Inventor's Signature	Date		
Full Name of Inventor:		_	Citizenship:
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Full Name of Inventor:		-	Citizenship:
Residence:			
Post Office Address:		 -	
Inventor's Signature	Date		
n.n.v.			
Full Name of Inventor:	-	-	Citizenship:
Residence:			
Post Office Address:			
	- <u>-</u>		
Inventor's Signature	Date		

8314402882 CREATIVE ATC PAGE 02 PATENT APPLICATION ATTORNEY DOCKET NO. 6407P212 DECLARATION AND COWER OF ATTORNEY FOR PATENT APPLACATION As a belowing a diventor, I hereby declare that: My residence/post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA the specification of which is attached hereto unless the following box is checked: (X) was filed on January 5, 2001 as US Application Serial No. or PCT International Application and was amended on 4/30/2004 (if applicable). Number <u>09/755,723</u> I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56. Foreign Application(s) and/or Claim of Foreign Priority I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed: PRIORITY CLAIMED UNDER 35 U.S.C. 119 APPLICATION NUMBER DATE FILED COUNTRY YES NO YES Provisional Application I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below: APPLICATION SERIAL NUMBER FILING DATE U.S. Priority Claim I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application: STATUS(patented/pending/abandoned) FILING DATE APPLICATION SERIAL NUMBER POWER OF ATTORNEY: As a named inventor. I hereby appoint the practitioners associated with Customer No. 40032 as my patent attorneys, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. Direct Telephone Calls To: Send Correspondence to: P. Francois de VIIUers Russell N. Swerdon Customer No. 40032 (408) 428-6600 Creative Labs. Inc.

1)01 lifections power and	i	1
Milpitas, CA 95035	1. C. C L. C. C L. C	-h-
Milpitus, CA 59033 hereby declare that all statements made herein of my own knowledge are true and that all statements made hat these statements were made with the knowledge that willful false statements and the like so made are 601 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of	punishable by line of imprisonment, or bout, under set	tio
Sull Name of Inventor: Ron GOODMAN	Citizenship: UNITED STATES	

Residence: 226 Jeter Street, Santa Cruz, CA USA 95060

Post Office Address: Same

July 2094

Inventor's Signature

Date

•			
DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (continued)			ATTORNEY DOCKET NO. 6407P212
Full Name of Inventor: Howard N. EGAN			Citizenship: UNITED STATES
Residence: 219 Ellnor Street, Capitola, CA 95010 USA			
Post Office Address: , Same	•		
11/16	7		
		2004	
Invent61 ³ s Signature			
Full Name of Inventor: <u>David BRISTOW</u>			Citizenship: UNITED KINGDOM
Residence: 5988 NE Tolo Road, Bainbridge Island, WA 98110			-
Post Office Address: Same			
Post Office Address: Same			
0	July	2004	
Inventor's Signature	••		
Full Name of Inventor:			Citizenship:
		_	
Residence:			
Post Office Address:			
	Date		· · · · · · · · · · · · · · · · · · ·
Inventor's Signature	24.7		
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Full Name of Inventor:		^	
Residence:			
Post Office Address:			
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Full Name of Inventor:		_	Cittering.
Residence:			
Post Office Address:			
Inventor's Signature	Date		
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Full Name of Inventor:		_	Citizensblp:
Residence:			
Post Office Address:		~~	
Inventor's Signature	Date		

Post Office Address: Same

Inventor's Signature

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SOR PATENT APPRICATION To residence past office address and citizenship are as stated below next to my name; by residence past office address and citizenship are as stated below one name is listed below) or an original, first and sole inventor (if only one name is listed below) or an original, first and sole inventor (if only one name is listed below) or an original, first and sole inventor (if only one name is listed below) of the subject matter which is claimed and for which a pattent is sought on the invention entitled: "UNDMATCHERRACHICAL CATEGORIZATION OF MUSIC BY METADATA (X) was filled on January 5, 2001 as US Application Serial No. or PCT International Application Number, 09/755,723 and was amended on 4/30/2004 (if applicable). Number of 1 have reviewed and understood the contents of the above-identified specification, including the claims, as amend as any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defin any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defin any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defin any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defin any amendment (s) referred to above. I acknowledge the duty to disclose all information which priority benefits under Title 35. United States Code Section 119 of any fareign application(s) for patent or invertor(s) certificate labove provisional application on which priority is claimed. COINTRY APPLICATION NUMBER DATE PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION SERIAL NUMBER PRICATION S	JUL U 9 ZUUA	VER OF ATTORNEY	1.12.			ATTO	RNEY DO	CKET NO. <u>6407P212</u>
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Bereby state that I have reviewed and understood the course of the duty to disclose all information which is material to patentability as defined and any any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined any any amendment of the profession of the prof	(X) was filed on J	anuary 5, 2001 as c	D Apprount				·	
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Fall Name of Inventor: Ron GOODMAN Citizenship: UNITED STATES	United States Code and that such	willful false statements may	jeopardize the v	calidity of the applic	anou or miy bare			
Residence: 226 Jeter Street, Santa Cruz, CA USA 95060	Full Name of Inventor: Ron C	OODMAN				Citizensh	р: <u>UNITED</u>	31/(11/0)
	Residence: 226 Jeter Street,	Santa Cruz, CA USA 9506	0					

Page 1

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (continued)			ATTORNEY DOCKET NO. 6407P212
Full Name of Inventor: Howard N. EGAN			Citizenship: UNITED STATES
Residence: 219 Elinor Street, Capitola, CA 95010 USA			
Post Office Address: Same			
	•		
Inventor's Signature	.July Date	2004	
Full Name of Inventor: David BRISTOW			Citizenship: UNITED KINGDOM
Residence: 5988 NE Tolo Road, Bainbridge Island, WA 98110			
Post Office Address: Same			
David Silve	July 7	2004	
Inventor's Signature	Date C		
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Full Name of Inventor:			Citizenship:
Residence:			
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Inventor's Signature	Date		
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Full Name of Inventor:			Cltizenship:
Residence:	· · · · · · · · · · · · · · · · · · ·		
Post Office Address:	·		
Inventor's Signature	Date		
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Full Name of Inventor:			Citizenship:
Residence:			
Post Office Address:			
. 0		.	
Inventor's Signature	Date		
Full Name of Inventor:			Cifizenship:
Residence:			
Post Office Address:			
Inventor's Signature	Date		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail No. ER86652274US with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

July 9, 2004

Date of Deposit

Cynthia K. Dawn

Name of Person Mailing Correspondence

Cynthia

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY **METADATA**

Applicant:

Ron Goodman

Filed:

January 5, 2001

TC/A.U.

2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

ASSENT OF ASSIGNEE UNDER 37 C.F.R. § 3.73(b) FOR CORRECTION OF INVENTORSHIP

Dear Sir:

Attached please find a copy of the Recordation of Assignment document that is currently on file with the U.S. Patent and Trademark Office concerning the above noted application. The Assignment document is being submitted to provide evidence of chain of title for this application.

07/14/2004 SHINASS1 00000096 09755723

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Assignee, CREATIVE TECHNOLOGY LTD., a Singapore corporation having a place of business at 31 International Business Park, Creative Resource, Singapore 609921, Republic of Singapore, does hereby assent to the correction of inventorship, the petition for which is filed herewith, which seeks to add David Bristow as an additional inventor in the above-referenced application. The undersigned of Creative Technology Ltd. does hereby declare, under penalty of perjury, that he is authorized by Creative Technology Ltd. to make this Assent of Assignee for Correction of Inventorship.

Respectfully submitted,

Dated: 7/6/, 2004

Chon Hock Leow

Chief Technology Officer

Hohm





UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

TOWNSEND AND TOWNSEND AND CREW LLP CHARLES E. KRUEGER TWO EMBARCADERO CENTER, EIGHTH FLOOR SAN FRANCISCO, CALIFORNIA 94111 GE Stanto 171717181A* 6 (7002 022 500 US

UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 04/23/2001

REEL/FRAME: 011788/0174

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

GOODMAN, RON

DOC DATE: 03/14/2001

ASSIGNOR:

EGAN, HOWARD N.

DOC DATE: 03/22/2001

ASSIGNEE:

CREATIVE TECHNOLOGY LTD., A CORP. OF THE REPUBLIC OF SINGAPORE 31 INTERNATIONAL BUSINESS PARK CREATIVE RESOURCE SINGAPORE, SINGAPORE 609921

SERIAL NUMBER: 09755723

PATENT NUMBER:

FILING DATE: 01/05/2001

ISSUE DATE:

011788/0174 PAGE 2

ALLYSON PURNELL, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

ASSIGNMENT OF PATENT APPLICATION

WHEREAS, RON GOODMAN, of 226 Jeter Street, Santa Cruz, CA 95060; HOWARD N. EGAN, of 219 Elinor Street, Capitola, CA 95010; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF

MUSIC BY METADATA

Date(s) of Execution:

Filing Date:

January 5, 2001

Application No.:

09/755,723; and

WHEREAS, CREATIVE TECHNOLOGY LTD., located at 31 International Business Park, Creative Resource, Singapore, 609921, hereinafter referred to as "ASSIGNEE," is desirous of acquiring ASSIGNORS' interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same:

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the said Assignees, and Assignees' successors and assigns, all their right, title and interest in and to the said invention and application, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignees as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

1
Assignment Attorney Docket No.: 17002-022500US Page 2
Dated: 3/14/2001 RON GOODMAN
STATE OF CALIFORNIA) ss.
COUNTY OF) ss.
on March 14, 2001, before me, Jacquelline W. Battano, personally appeared RON GOODMAN, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her-signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.
JACQUELINE W. BAZZANO Commission # 1132234 Notary Public — Caffords Santa Cruz County My Comm. Expires Apr 2, 2001 My Commission Expires: 4/2/2001
Dated: 3 - 2 2 - 2001 HOWARD N. EGAN
STATE OF CALIFORNIA)
COUNTY OF) ss.
on March 22, 3001 , before me, Jacqueline W Bazzano (Notary Public personally appeared HOWARD N. EGAN , personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she-executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
JACQUELINE W. BAZZANO Commission # 113224 Notory Public — Collonia Sonto Cruz County My Comm. Expires Apr 2, 2001
My Commission Expires: 41 2/2001

07-12-04

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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July 9, 2004 Date of Deposit

Cynthia K. Dawn Name of Person Mailing Correspondence

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Applicant:

Ron Goodman

Filed:

January 5, 2001

TC/A.U.

2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Match and Return

AMENDMENT AND PETITION UNDER 37 C.F.R. § 1.48(c) TO CORRECT INVENTORSHIP

Dear Sir:

The undersigned hereby respectfully requests and petitions that the above-referenced application be amended under 37 C.F.R. § 1.48(c) to correct inventorship of the application.

ation be amended under 37 C.F.R. § 1.48(c) to correct inventorship of the application.

The application was filed on January 5, 2001 naming the following persons as inventors present patent application: of the present patent application:

- (1) Ron Goodman, a citizen of the United States, residing at 226 Jeter Street, Santa Cruz, CA 95060; and
- (2) Howard N. Egan, a citizen of the United States, residing at 219 Elinor Street, Capitola, CA 95010.

Please correct and amend the present patent application so that David Bristow, a citizen of the United Kingdom, residing at 5988 NE Tolo Road, Bainbridge Island, WA 98110 is additionally named as a joint inventor of the present patent application.

It is respectfully submitted that the amendment is necessitated by amendment of the claims and that the error in inventorship of the present patent application was made without any deceptive intent by anyone, including the actual inventors.

Enclosed with this Amendment and Petition are the following documents:

- (1) a verified Statement of Facts by David Bristow stating that the addition in inventorship of the present patent application is necessitated by amendment of the claims and that the inventorship error occurred without any deceptive intent on his part;
 - (2) an executed Declaration/Power of Attorney indicating all inventors; and
- (3) an Assent of Assignee for Correction of Inventorship with a copy of the previously recorded Notice of Recordation of Assignment document.

The Assignment by the additional inventor, David Bristow, to be recorded in accordance with 37 C.F.R. § 1.33(1), and a check in the amount of \$40.00 to cover the recordation fee required by 37 C.F.R. § 1.21(h), are being forwarded separately to the Assignment Division.

Enclosed herewith is a check in the amount of \$130.00 in payment of the fee under 37 C.F.R. § 1.17(i) for correction of inventorship.

Respectfully submitted,

Dated: July 9, 2004

Russell N. Swerdon

Reg. No. 36,943

Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

09/755,723

2

6407P212

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Thereby certify that this correspondence is being deposited with the United States Postal Service as Expensed of the Commissioner for Patents. P.O. Box 1450, Alexandria, VA 22313-1450.

On Suly 9, 2004

Date of Deposit

Cynthia & Dawn

Name of Person Mailing Correspondence

Cynthia & Dawn

Guly 9, 2004

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Applicant:

Ron Goodman

Filed:

January 5, 2001

TC/A.U.

2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

STATEMENT OF FACTS BY DAVID BRISTOW UNDER 37 C.F.R. § 1.48(c)

Dear Sir:

I hereby declare:

I am making this Statement of Facts under 37 C.F.R. § 1.48(c) in connection with U.S. Patent Application Serial No.09/755,723 filed January 5, 2001 (hereinafter referred to as "the present patent application").

- My current residence and country of citizenship is as follows:
 David Bristow, a citizen of the United Kingdom, residing at 5988 NE Tolo Road, Bainbridge Island, WA 98110.
- 3. The amendment in inventorship is made as necessitated by amendment of the claims. An inventorship error was made by naming only Ron Goodman and Howard N. Egan as joint inventors, rather than naming Ron Goodman, Howard N. Egan and David Bristow as joint inventors.
- The inventorship error was made without any deceptive intent whatsoever on my part.
- 5.— It is now requested that the additional inventor David Bristow be added to the present patent application.

I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: July 2004

David Bristov

PATENT APPLICATION

DECLARATION AND POWER OF ATTORNE	
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ATTORNEY DOCKET NO. 6407P212

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

the specification of which is attached hereto unless the following box is checked:

(X) was filed on January 5, 2001 as US Application Serial No. or PCT International Application

Number 09/755,723 and was amended on 4/30/2004 (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED PRIORITY CLAIMED UNDER 35 U.S.C. 119	
			- YES: NO:
			YES: NO:

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

U.S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS(patented/pending/abandoned)
· · · · · · · · · · · · · · · · · · ·		

POWER OF ATTORNEY:

As a named invertor, I hereby appoint the practitioners associated with Customer No. 40032 as my patent attorneys, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith

Send Correspondence to:	Direct Telephone Cells Te
Schia Correspondence to.	Direct Telephone Calls To:
P. Francois de Villiers	
Customer No. 40032	Russell N. Swerdon
Creative Labs, Inc.	(408) 428-6600
1901 McCarthy Boulevard	` <i>'</i>
Milpitas, CA 95035	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: Ron GOODMAN	Citizenship: UNITED STATES
Residence: 226 Jeter Street, Santa Cruz, CA USA 95060	
Post Office Address: Same	·
Ron Goodman	
Inventor's Signature	July 7 , 2004 Date

Page 1

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (continued)		ATTORNEY DOCKET NO. 6407P212
Full Name of Inventor: <u>Howard N. EGAN</u>		Citizenship: UNITED STATES
Residence: 219 Elinor Street, Capitola, CA 95010 USA		
Post Office Address: Same	34-74-5	
Inventor's Signature	<u>July</u> Date	, 2004
		•
Full Name of Inventor: <u>David BRISTOW</u>		Citizenship: UNITED KINGDOM
Residence: 5988 NE Tolo Road, Balnbridge Island, WA 98110	· · · · · · · · · · · · · · · · · · ·	
Post Office Address: Same		
	Tubu	2004
Inventor's Signature	<u>July</u> Date	, 2004
•		
Full Name of Inventor:		Citizenship:
Residence:		
Post Office Address:		
A state of		
inventor's Signature	Date	
Full Name of Inventor:		Citizenship:
Residence:		
Post Office Address:		
nventor's Signature	Date	
Full Name of Inventor:		Citizenship:
Residence:		
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inventor's Signature	Date	
Call Name of Yayantan		Cities and the
Full Name of Inventor:		Citizenship:
Residence:		
Post Office Address:		
inventor's Signature	Data.	
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PATENT APPLICATION

CREATIVE ATC

		OF.	ATTODNEY
DUTTE ARABILIN	AUTHORIVE		
DECLARATION	*****		
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ATTORNEY DOCKET NO. 6407P212

FOR MATENT APPLACATION
As a below the most afficient, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled;

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

the specification of which is attached hereto unless the following box is checked:

(X) was filed on January 5, 2001 as US Application Serial No. or PCT International Application

and was amended on 4/30/2004 (if applicable). Number <u>09/755,723</u> I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

t hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			YES: NO: `
			YES: NO:

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(c) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE
·	1

U.S. PRIORITY CHAIM
I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.36(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	filing date	STATUS(patented/pending/abandoned)

POWER OF ATTORNEY:

As a named inventor. I hereby appoint the practitioners associated with Customer No. 40032 as my patent attorneys, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Send Correspondence to:	Direct Telephone Calls To:
P. Francois de Villiers Customer No. 40032 Creative Labs, Inc. 1901 McCarthy Boulevard	Russell N. Swerdon (498) 428-6600
Milpitas, CA 95035	the state of the s
I hereby declare that all statements made herein of a	by own knowledge are true and that all statements made on information and belief are believed to be true; and furnished the life on made are numishable by fine or interisonment, or both, under Sec

ψœ that these statements were made with the knowledge that 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: Ron GOODMAN	Cifizenship: UNATED STATES
Residence: 226 Jeter Street, Santa Cruz, CA USA 95060	
Post Office Address: Same	
Inventor's Signature	July , 2004 Date

DECLARATION AND POWER OF ATTORN	SEV.		ATTORNEY DOCKET NO. 6407F212
FOR PATENT APPLICATION (continued)	101		
Full Name of Inventor: Howard N. EGAN			Citizenship: UNITED STATES
Residence: <u>219 Elinor Street, Capitola, CA 95010 US</u>	<u> А</u>		
Post Office Address: Same			
1/12		July 7 2 Date	1004
Inventor's Signature		. pate	
Fall Name of Inventor: David BRISTOW		<u> </u>	Citizenship: UNITED KINGDOM
Residence: 5988 NE Tolo Road, Bainbridge Island.	WA 98110		
Post Office Address: Same			
Post Office Andress: Same			-
Inventor's Signature		July Date	2004
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Full Name of Inventor:	₩ 	<u></u>	Citizenship:
Residence:			
l'ost Office Address:			
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Inventor's Signature		Date	
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Full Name of Inventors			Cltizeushlp:
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Full Name of Inventor:			Citzenship:
Residence:			
Post Office Address:			
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Full Name of Inventor:	***************************************		
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POWER OF ATTORNEY:	Charles No. 40032 as	my patent attorneys, with full power of substitution and revocation, to

Direct Telephone Calls To: Send Correspondence to: P. Francois de Villiers Russell N. Swerdon Customer No. 40032 (408) 428-6600 Creative Labo, Inc. 1901 McCarthy Boulevard

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	Citizenship: UNITED STATES
ull Name of Inventor: Ron GOODMAN	
Residence: 226 Jeter Street, Santa Cruz, CA USA 95060	
Post Office Address: Same	
nventor's Signature	July 2004 : Date

Page 1

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (continued)	. A	ITORNEY DOCKET NO. 64117P212	
rull Name of Inventor: Howard N. EGAN	Cit	Citizenship: UNITED STATES	
Residence: 219 Ellnor Street, Capitola, CA 25010 USA			
Post Office Address: Same			
	•		
Inventor's Signature	July 2004 Date	· · · · · · · · · · · · · · · · · · ·	
THE STATE OF THE S	Cit	zenship: UNITED KINGDOM	
Full Name of Inventor: David BRISTOW			
Residence: 5988 NF, Tolo Road, Balmbridge Island, WA 98110			
Post Office Address: Same	July 7 , 2004		
Inventor's Signature	Date		
	•	•	
Full Name of Inventor:	Cit	izenship:	
Residence:			
Post Office Address:			
Inventor's Signature	Date		
Full Name of Inventor:	Cio	tzenship:	
Residence:			
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Inventor's Signature	Date		
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Full Name of Inventor:	Cli	izenship:	
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Inventor's Signature	1/445		
	,	Huanah Ja	
Full Name of Inventor:	CI	lizenship:	
Residence:			
Post Office Address:			
	Data		



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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July 9, 2004 Date of Deposit

Cynthia K. Dawn
Name of Person Mailing Correspondence

sirttro

Application No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY **METADATA**

Applicant:

Ron Goodman

Filed:

January 5, 2001

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2175

Examiner:

Rones, Charles

Docket No.:

6407P212

Customer No.:

40032

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

ASSENT OF ASSIGNEE UNDER 37 C.F.R. § 3.73(b) FOR CORRECTION OF INVENTORSHIP

Dear Sir:

Attached please find a copy of the Recordation of Assignment document that is currently on file with the U.S. Patent and Trademark Office concerning the above noted application. The Assignment document is being submitted to provide evidence of chain of title for this application. Match and Return

07/14/2004 SHINASS1 00000096 09755723

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01 FC:1460

Assignee, CREATIVE TECHNOLOGY LTD., a Singapore corporation having a place of business at 31 International Business Park, Creative Resource, Singapore 609921, Republic of Singapore, does hereby assent to the correction of inventorship, the petition for which is filed herewith, which seeks to add David Bristow as an additional inventor in the above-referenced application. The undersigned of Creative Technology Ltd. does hereby declare, under penalty of perjury, that he is authorized by Creative Technology Ltd. to make this Assent of Assignee for Correction of Inventorship.

Respectfully submitted,

Dated: ______, 2004

Chon Hock Leow

Chief Technology Officer





UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

TOWNSEND AND TOWNSEND AND CREW LLP CHARLES E. KRUEGER TWO EMBARCADERO CENTER, EIGHTH FLOOR SAN FRANCISCO, CALIFORNIA 94111



UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 04/23/2001

REEL/FRAME: 011788/0174

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

GOODMAN, RON

DOC DATE: 03/14/2001

ASSIGNOR:

EGAN, HOWARD N.

DOC DATE: 03/22/2001

ASSIGNEE:

CREATIVE TECHNOLOGY LTD., A CORP. OF 'THE REPUBLIC OF SINGAPORE 31 INTERNATIONAL BUSINESS PARK CREATIVE RESOURCE SINGAPORE, SINGAPORE 609921

SERIAL NUMBER: 09755723

PATENT NUMBER:

FILING DATE: 01/05/2001

ISSUE DATE:

011788/0174 PAGE 2

ALLYSON PURNELL, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

Attorney Docket No.: 17002-022500US Client Reference No.: CT-1139

ASSIGNMENT OF PATENT APPLICATION

WHEREAS, RON GOODMAN, of 226 Jeter Street, Santa Cruz, CA 95060; HOWARD N. EGAN, of 219 Elinor Street, Capitola, CA 95010; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF

MUSIC BY METADATA

Date(s) of Execution:

Filing Date:

January 5, 2001

Application No.:

09/755,723; and

WHEREAS, CREATIVE TECHNOLOGY LTD., located at 31 International Business Park, Creative Resource, Singapore, 609921, hereinafter referred to as "ASSIGNEE," is desirous of acquiring ASSIGNORS' interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the said Assignees, and Assignees' successors and assigns, all their right, title and interest in and to the said invention and application, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignees as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Assignment Attorney Docket No.: 17002-022500US Page 2 Dated: 3/14/2001 RON GOODMAN
STATE OF CALIFORNIA) SS. COUNTY OF)
on <u>March 14, 2001</u> , before me, <u>Incaucline W. Pattano</u> personally appeared <u>RON GOODMAN</u> , personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal.
JACQUEINE W. BAZZANO Commission # 1132234 Notary Public — California Santia Cruz County My Comm. Expires Apr 2, 2001 My Commission Expires: #/2-/2001
Dated: 3 - 2 2 - 2001 HOWARD N. EGAN
STATE OF CALIFORNIA) ss. COUNTY OF)
on March 22, 3001 , before me, Jacqueline W Battano (Notary Public) personally appeared HOWARD N. EGAN , personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she-executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
WITNESS my hand and official seal. JACQUEINE W BAZZANO Commission • 113224 Notary Public — Contamb Santo Cruz County My Comm. Captres Apr 2, 2001 NOVARY PUBLIC My Commission Expires: 4/ 2/2001

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REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

 Application Number
 09/755,723

 Filing Date
 1/5/2001

 First Named Inventor
 GOODMAN et al.

 Art Unit
 2175

 Examiner Name
 Rones, Charles

 Attorney Docket Number
 6407P212

A Power of Attorney is submitted herewith. OR X I hereby appoint the practitioners associated with the Customer Number: 40032 X Please change the correspondence address for the above-identified application to: X The address associated with Customer Number: OR Firm or Individual Name	I hereby revoke a	all previous powers of attorne	given in the above	-identifie	d application		
X I hereby appoint the practitioners associated with the Customer Number: 40032 X Please change the correspondence address for the above-identified application to: X The address associated with Customer Number: 40032 OR Firm or	A Power of	Attorney is submitted herew	th.				
X The address associated with Customer Number: OR Firm or							
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Country	Country						
Telephone Fax	Telephone			Fax			
Applicant/Inventor. Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	X Assignee	e of record of the entire interest		3/96)			
SIGNATURE of Applicant or Assignee of Record		SIGNATURE	of Applicant or Assi	gnee of F	Record		
Name Chon Hock Leow	Name Cr	hon Hock Leow	, ,				
	Signature	Memb	Lokhun	, 			
Date 7/6/04/ Telephone (408) 428-6600	Date	7/6/04/ 10	Tel	ephone	(408) 428-66	00	

This collection of information is required by 37 CFR 1.36. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

forms are submitted.

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STATEMENT UNDER 37 CFR 3.73(b) Applicant/Patent Owner: CREATIVE TECHNOLOGY LTD. Application No./Patent No.: ____09/755,723 ____ Filed/Issue Date: ___ 1/5/2001 AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA CREATIVE TECHNOLOGY LTD. a CORPORATION (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.) (Name of Assignee) states that it is: 1. X the assignee of the entire right, title, and interest; or an assignee of less than the entire right, title and interest. The extent (by, percentage) of its ownership interest is ___ in the patent application/patent identified above by virtue of either: A. [X] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel/Frame 011788/0174, or for which a copy thereof is attached. B. [] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below: 1. From: To: The document was recorded in the United States Patent and Trademark Office at , or for which a copy thereof is attached. Reel 2. From: To: The document was recorded in the United States Patent and Trademark Office at , Frame _____, or for which a copy thereof is attached. To: The document was recorded in the United States Patent and Trademark Office at _, or for which a copy thereof is attached. ____, Frame __ [] Additional documents in the chain of title are listed on a supplemental sheet. Copies of assignments or other documents in the chain of title are attached. [NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08] The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee. (408) 428-6600 Telephone number

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6407P212

Attorney Docket Number

ATTORNEY WITH **NEW POWER OF ATTORNEY AND**

CHANGE OF CORRESPONDENCE ADDRESS

I hereby revoke all previous powers of attorney given in the above-identified application.								
A Power of Attorney is submitted herewith.								
OR X I hereby appoint the practitioners associated with the Customer Number: 40032								
X Please c	X Please change the correspondence address for the above-identified application to:							
	address a omer Nur	associated w mber:	ith .	400	32			,
OR	-							
Firm or Individual	Name			\ \				
Address								
Address								
City								
	Country Telephone Fax							
	I am the: Applicant/Inventor.							
X Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)								
SIGNATURE of Applicant or Assignee of Record								
Name Chon Hock Leow								
Signature								
Date	7/	6/04/	10		Telephone	(408) 428-66	00	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.								
X *Total of forms are submitted.								

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EMP STAT	TEMENT UNDER 37 CFR 3.73(b)
Applicant/Patent Owner:CREATIVE TECHNO	
Application No./Patent No.: 09/755,723	Filed/Issue Date: 1/5/2001
Entitled: AUTOMATIC HIERARCHICAL CAT	EGORIZATION OF MUSIC BY METADATA
CREATIVE TECHNOLOGY LTD.	, a CORPORATION
(Name of Assignee)	(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)
states that it is: 1. X the assignee of the entire right, title, and 2. an assignee of less than the entire right,	
The extent (by, percentage) of its owners	
in the patent application/patent identified above b	by virtue of either:
A. [X] An assignment from the inventor(s) of the interest of the United States Patent and Trademark Office	he patent application/patent identified above. The assignment was recorded e at Reel/Frame <u>011788/0174</u> , or for which a copy thereof is attached.
OR'	•
B. [] A chain of title from the inventor(s), of the shown below:	he patent application/patent identified above, to the current assignee as
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The undersigned (whose title is supplied below) i	is authorized to act on behalf of the assignee.
7/6/84	CHON HOCK LEOW
Date	Typed or printed name
(408) 428-6600	floor for the form
Telephone number	Signature
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Goodman, et al

Application No.: 09/755,723

Filed: January 5, 2001

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Attorney Docket No.:

6407P212

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Examiner: Rones, Charles L.

JL 2 7 2004

Group: 2175

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office (FAX. No. (703) 872-9306 on July 27, 2004.

Cynthia K. Dawn

Amendment After Notice of Allowance, pursuant to 37 CFR 1.312

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

The enclosed remarks and amendments are submitted under the provisions of 37 CFR 1.312. This amendment is filed on or before the date the issue fee is paid. Applicants respectfully request reconsideration of the captioned application in view of the following remarks and amendments. A listing of the claims commences on page 2. Remarks begin on page 6 of this paper. Formal drawings are also attached to replace several informal drawings in the drawing package previously submitted.

USSN: 09/755,723

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Atty Dkt No.: 6407P212

PAGE 1/12 * RCVD AT 7/27/2004 2:57:02 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/8 * DNIS:8729306 * CSID:408 428 6699 * DURATION (mm-ss):03-50

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Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1-23. (cancelled)

24. (currently amended) A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks accessed organized according to a file hierarchy, the file hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:

selecting a category in the first display screen of the portable media player; displaying the subcategories belonging to the selected category in a listing presented in the second display screen;

selecting a subcategory in the second display screen;

displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and

accessing at least one track based on a selection made in one of the display screens.

- 25. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory in the second display screen and playing a plurality of tracks associated with the selected subcategory.
- 26. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory and adding the tracks associated with the selected subcategory to a playlist.

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- 27. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting an item in the third display screen and playing at least one track associated with the selected item.
- 28. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting an item in the third display screen and adding at least one track associated with the selected item to a playlist.
- 29. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises one of playing or adding to a playlist at least one track associated with a selected one of the category, subcategory, and item.
- 30. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track is made after the presentation of the third display screen by reverting back to one of the second and first display screens, the second display screen presented sequentially after the third display screen.
- 31. (previously presented) The method of selecting a track as recited in claim 24 further comprising selecting one of the items displayed in the third display screen and presenting a listing of items associated with the selected item in a fourth sequentially presented display screen.
- 32. (previously presented) The method of selecting a track as recited in claim 24 wherein the category genre is selected in the first display screen from available categories that include at least artist, album, and genre; and the subcategories listed in the second display screen comprise a listing of at least one genre type and one of the at least one genre type is selected.
- 33. (previously presented) The method of selecting a track as recited in claim 32 further comprising displaying in the third display screen at least one album associated with the selected genre type and selecting one of the at least one albums displayed in the

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USSN: 09/755,723

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third display screen and presenting a listing of tracks associated with the selected album in a fourth sequentially presented display screen.

- 34. (previously presented) The method of selecting a track as recited in claim 24 wherein the category artist is selected in the first display screen from available categories that include at least artist, album, and genre; the subcategories listed in the second display screen comprise a listing of names of artists and a first artist name is selected; and the items displayed in the third display screen comprises at least one album associated with the first artist name.
- 35. (currently amended) The method of selecting a track as recited in claim 24 wherein the track is a music track, accessing at least one track comprises accessing a track title the item-accessed in the third display screen is a track title, and the track is played in response to the access.
- 36. (previously presented) The method of selecting a track as recited in claim 24 wherein receipt of the selection in the first display screen results in an automatic transition of the first display screen into the second display screen and receipt of the selection in the second display screen results in an automatic transition of the second display screen into the third display screen.
- 37. (new) The method of selecting a track as recited in claim 24 wherein the category selected in the first display screen is from a top level of the hierarchy.
- 38. (new) The method of selecting a track as recited in claim 24 wherein the category selected in the first display screen is a category from a level at least one level below the top level of the hierarchy.
- 39. (new) The method of selecting a track as recited in claim 24 wherein the plurality of categories comprise a list of artist names, the plurality of subcategories comprise a list of album names and the plurality of items comprise a list of track names.

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REMARKS

The examiner had indicated the allowability of claims 24-36 in a notice of allowance mailed on June 9, 2004. As a result of the amendment filed on or about April 30, only claims 1 and 24-36 had been pending.

Applicants herewith have amended the claims to cancel claim 1. Claim 1 had previously been merely withdrawn, hence the cancellation deals with mere informalities. Independent claim 24 has been amended to identify in the preamble that the plurality of tracks are accessed according to a hierarchy instead of organized according to a file hierarchy. Applicants believe that this amendment should be entered for at least the reason that it helps clarify the invention and that the amended claim with the change in only two words is allowable for the same reasons as the previously presented claim was found to be allowable by the Examiner. Further, the claim is patentable over the art of record for at least the reason that Grewe doesn't teach or suggest displaying categories or subcategories in a display screen.

Dependent claim 35 has been amended to overcome any problems as to explicit antecedent basis for the phrase "the item accessed" and hence largely deals with informalities. Dependent claims 37, 38, and 39 are new claims, all of which are dependent from independent claim 24. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers (35 USC 112.) These claims add a further limitation to independent claim 24 and thus help clarify applicant's invention. Since the added claims are dependent claims, applicants submit that this reason alone strongly supports their entry. In particular, MPEP section 714.16 notes in pertinent part as follows:

"Where claims added by amendment under 37 CFR 1.312 are all of the form of dependant claims, some of the usual reasons for nonentry are less likely to apply."

The dependent claims depend from an allowed independent claim (claim 24) and are therefore patentable for at least the same reason as the independent claim 24. Support for the amendments may be found in the drawings, FIGS. 1,3, 7, 10-11, their associated descriptions, and throughout the specification, in particular the abstract and page 8. They

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USSN: 09/755,723

Atty Dkt No.: 6407P212

PAGE 6/12 * RCVD AT 7/27/2004 2:57:02 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/8 * DNIS:8729306 * CSID:408 428 6699 * DURATION (mm-ss):03-50

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add no new matter. The amendments to claim 35 had not been submitted previously because the lack of proper antecedent basis for the terms used had not been noticed previously. Allowed claims 24-36 had first been presented in the amendment recently filed on April 30, 2004 (in response to a restriction requirement) and thus had not been previously involved in any discussions or communications between the examiner and applicants. Applicants submit that the amendments to add dependent claims 37-39 are proper to help clarify and disclose applicant's invention.

Conclusion

Applicants believe that entry of the amendment is proper and respectfully request that the application not be withdrawn from issue. Applicants respectfully request that the primary examiner recommend entry of the amendment as provided by the guidelines set forth in MPEP Section 714.16(a), including the claim amendments discussed above and the entry of replacement formal drawings, FIGS. 9-13, as discussed in the drawings amendment section. Applicants believe that consideration of the matters presented herein will not require any substantial amount of additional work on the part of the Office and are needed for proper disclosure of the invention. If the Examiner believes that a telephone conference would expedite the prosecution of this application, he is invited to contact the Applicants' undersigned attorney at the telephone number set out below.

Respectfully submitted,

Russell N. Severdon Registration No. 36,943

Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

USSN: 09/755,723

Atty Dkt No.: 6407P212

PAGE 7/12 * RCVD AT 7/27/2004 2:57:02 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/8 * DNIS:8729306 * CSID:408 428 6699 * DURATION (mm-ss):03-50

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Amendments to the Drawings:

Five sheets of Replacement Drawings for Figures 9-13 are attached. These are formal drawings submitted to replace the informal drawings submitted and entered with the April 30 amendment. Inasmuch as the previously submitted informal drawings include handwritten reference numbers and grayscale sectioning that may be unsuitable for publication, applicants request entry of the formal drawings attached.

ATTACHMENT: 5 sheets of formal drawings

USSN: 09/755,723

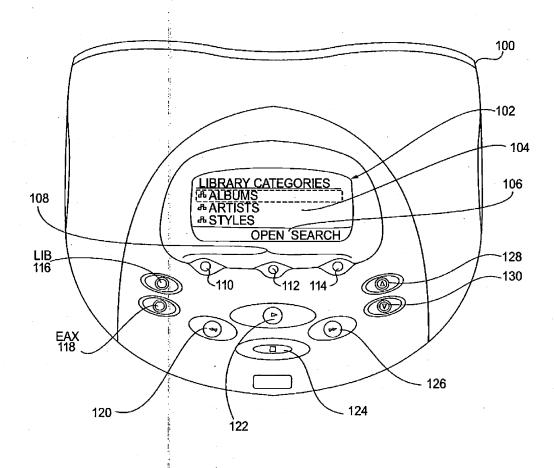
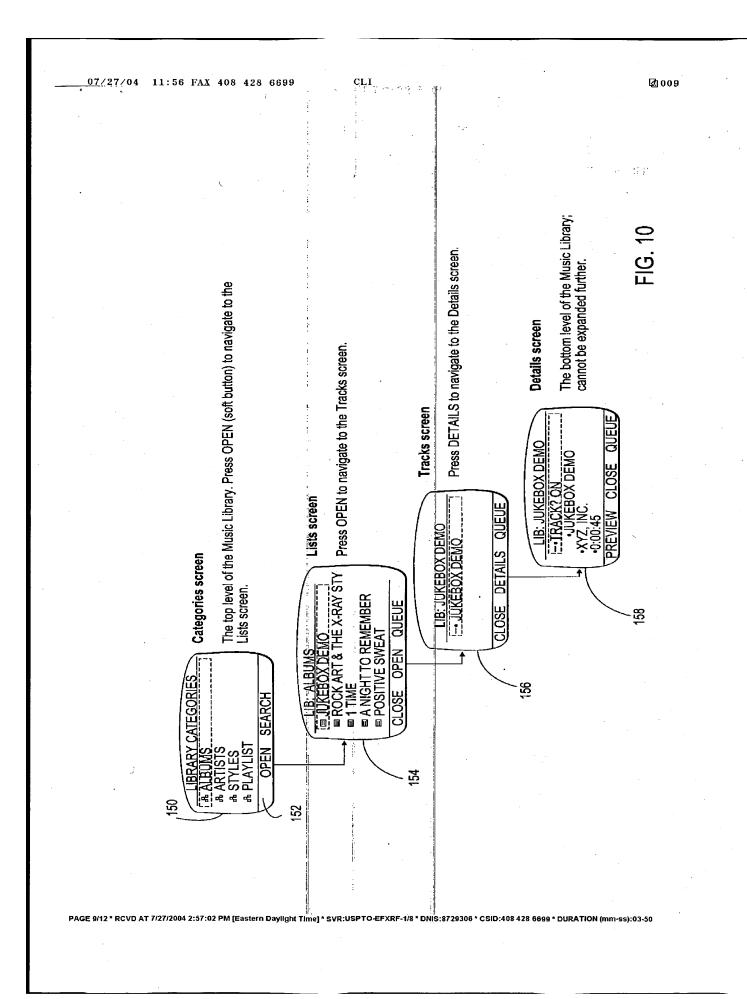
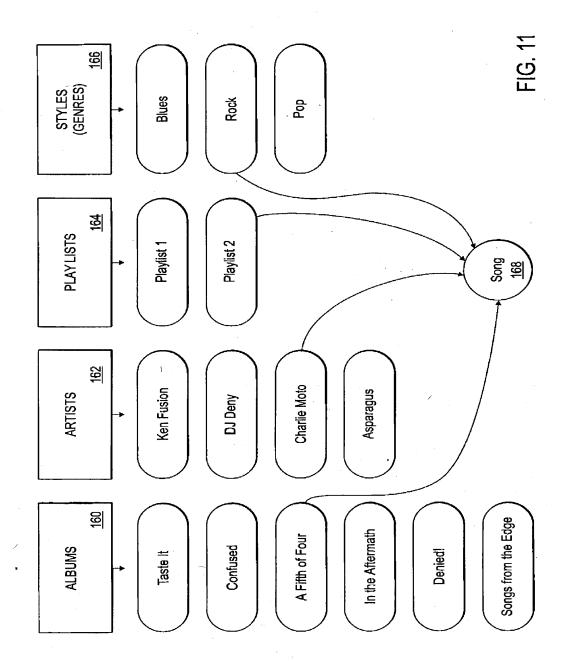


FIG. 9

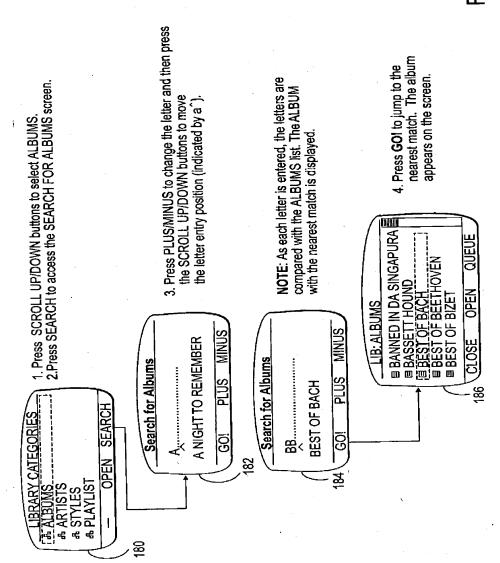
PAGE 8/12 * RCVD AT 7/27/2004 2:57:02 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/8 * DNIS:8729306 * CSID:408 428 6699 * DURATION (mm-ss):03-50



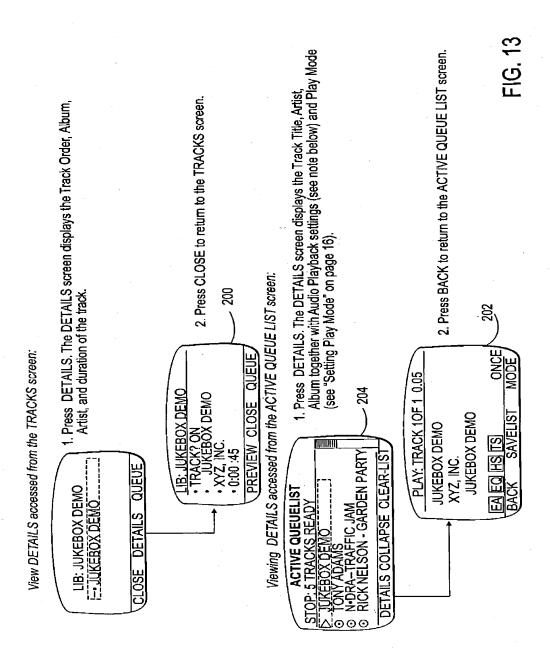


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FIG. 12



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Goodman, et al

6407P212

RECEIVED

Application No.: 09/755,723

Examiner: Rones, Charles L.

CENTRAL FAX CENTER

Filed: January 5, 2001

Group: 2175

0155

Attorney Docket No.:

OFFICIAL

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

CERTIFICATE OF FACSIMILE TRANSMISSION
I heroby certify that this correspondence is being facsimile
transmitted to the United States Patent and Trademark Office
(FAX. No. (703) 872-9306 on July 27, 2004.

Signed: Cynthia K. Dawn

Amendment After Notice of Allowance, pursuant to 37 CFR 1.312

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

The enclosed remarks and amendments are submitted under the provisions of 37 CFR 1.312. This amendment is filed on or before the date the issue fee is paid.

Applicants respectfully request reconsideration of the captioned application in view of the following remarks and amendments. A listing of the claims commences on page 2.

Remarks begin on page 6 of this paper. Formal drawings are also attached to replace several informal drawings in the drawing package previously submitted.

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Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1-23. (cancelled)

24. (currently amended) A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks accessed organized according to a file hierarchy, the file hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:

selecting a category in the first display screen of the portable media player; displaying the subcategories belonging to the selected category in a listing presented in the second display screen;

selecting a subcategory in the second display screen;

displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and

accessing at least one track based on a selection made in one of the display screens.

25. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory in the second display screen and playing a plurality of tracks associated with the selected subcategory.

36. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting a subcategory and adding the tracks associated with the selected subcategory to a playlist.

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(previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting an item in the third display screen and playing at least one track associated with the selected item.

28. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises selecting an item in the third display screen and adding at least one track associated with the selected item to a playlist.

29. (previously presented) The method of selecting a track as recited in claim 24 wherein the accessing at least one track comprises one of playing or adding to a playlist at least one track associated with a selected one of the category, subcategory, and item.

30. (previously presented) The method of selecting a track as recited in claim. 24 wherein the accessing at least one track is made after the presentation of the third display screen by reverting back to one of the second and first display screens, the second display screen presented sequentially after the third display screen.

further comprising selecting one of the items displayed in the third display screen and presenting a listing of items associated with the selected item in a fourth sequentially presented display screen.

32. (previously presented) The method of selecting a track as recited in claim 24 wherein the category genre is selected in the first display screen from available categories that include at least artist, album, and genre; and the subcategories listed in the second display screen comprise a listing of at least one genre type and one of the at least one genre type is selected.

further comprising displaying in the third display screen at least one album associated with the selected genre type and selecting one of the at least one albums displayed in the

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third display screen and presenting a listing of tracks associated with the selected album in a fourth sequentially presented display screen.

wherein the category artist is selected in the first display screen from available categories that include at least artist, album, and genre; the subcategories listed in the second display screen comprise a listing of names of artists and a first artist name is selected; and the items displayed in the third display screen comprises at least one album associated with the first artist name.

35. (currently amended) The method of selecting a track as recited in claim 24 wherein the track is a music track, accessing at least one track comprises accessing a track title the item-accessed in the third display screen is a track title, and the track is played in response to the access.

36. (previously presented) The method of selecting a track as recited in claim 24 wherein receipt of the selection in the first display screen results in an automatic transition of the first display screen into the second display screen and receipt of the selection in the second display screen results in an automatic transition of the second display screen into the third display screen.

37. (new) The method of selecting a track as recited in claim 24 wherein the category selected in the first display screen is from a top level of the hierarchy.

28. (new) The method of selecting a track as recited in claim 24 wherein the category selected in the first display screen is a category from a level at least one level below the top level of the hierarchy.

25. (new) The method of selecting a track as recited in claim 24 wherein the plurality of categories comprise a list of artist names, the plurality of subcategories comprise a list of album names and the plurality of items comprise a list of track names.

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Amendments to the Drawings:

Five sheets of Replacement Drawings for Figures 9-13 are attached. These are formal drawings submitted to replace the informal drawings submitted and entered with the April 30 amendment. Inasmuch as the previously submitted informal drawings include handwritten reference numbers and grayscale sectioning that may be unsuitable for publication, applicants request entry of the formal drawings attached.

ATTACHMENT: 5 sheets of formal drawings

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REMARKS

The examiner had indicated the allowability of claims 24-36 in a notice of allowance mailed on June 9, 2004. As a result of the amendment filed on or about April 30, only claims 1 and 24-36 had been pending.

Applicants herewith have amended the claims to cancel claim 1. Claim 1 had previously been merely withdrawn, hence the cancellation deals with mere informalities. Independent claim 24 has been amended to identify in the preamble that the plurality of tracks are accessed according to a hierarchy instead of organized according to a file hierarchy. Applicants believe that this amendment should be entered for at least the reason that it helps clarify the invention and that the amended claim with the change in only two words is allowable for the same reasons as the previously presented claim was found to be allowable by the Examiner. Further, the claim is patentable over the art of record for at least the reason that Grewe doesn't teach or suggest displaying categories or subcategories in a display screen.

Dependent claim 35 has been amended to overcome any problems as to explicit antecedent basis for the phrase "the item accessed" and hence largely deals with informalities. Dependent claims 37, 38, and 39 are new claims, all of which are dependent from independent claim 24. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers (35 USC 112.) These claims add a further limitation to independent claim 24 and thus help clarify applicant's invention. Since the added claims are dependent claims, applicants submit that this reason alone strongly supports their entry. In particular, MPEP section 714.16 notes in pertinent part as follows:

"Where claims added by amendment under 37 CFR 1.312 are all of the form of dependant claims, some of the usual reasons for nonentry are less likely to apply."

The dependent claims depend from an allowed independent claim (claim 24) and are therefore patentable for at least the same reason as the independent claim 24. Support for the amendments may be found in the drawings, FIGS. 1,3, 7, 10-11, their associated descriptions, and throughout the specification, in particular the abstract and page 8. They

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add no new matter. The amendments to claim 35 had not been submitted previously because the lack of proper antecedent basis for the terms used had not been noticed previously. Allowed claims 24-36 had first been presented in the amendment recently filed on April 30, 2004 (in response to a restriction requirement) and thus had not been previously involved in any discussions or communications between the examiner and applicants. Applicants submit that the amendments to add dependent claims 37-39 are proper to help clarify and disclose applicant's invention.

Conclusion

Applicants believe that entry of the amendment is proper and respectfully request that the application not be withdrawn from issue. Applicants respectfully request that the primary examiner recommend entry of the amendment as provided by the guidelines set forth in MPEP Section 714.16(a), including the claim amendments discussed above and the entry of replacement formal drawings, FIGS. 9-13, as discussed in the drawings amendment section. Applicants believe that consideration of the matters presented herein will not require any substantial amount of additional work on the part of the Office and are needed for proper disclosure of the invention. If the Examiner believes that a telephone conference would expedite the prosecution of this application, he is invited to contact the Applicants' undersigned attorney at the telephone number set out below.

Respectfully submitted

Russell N. Seerdon Registration No. 36,943

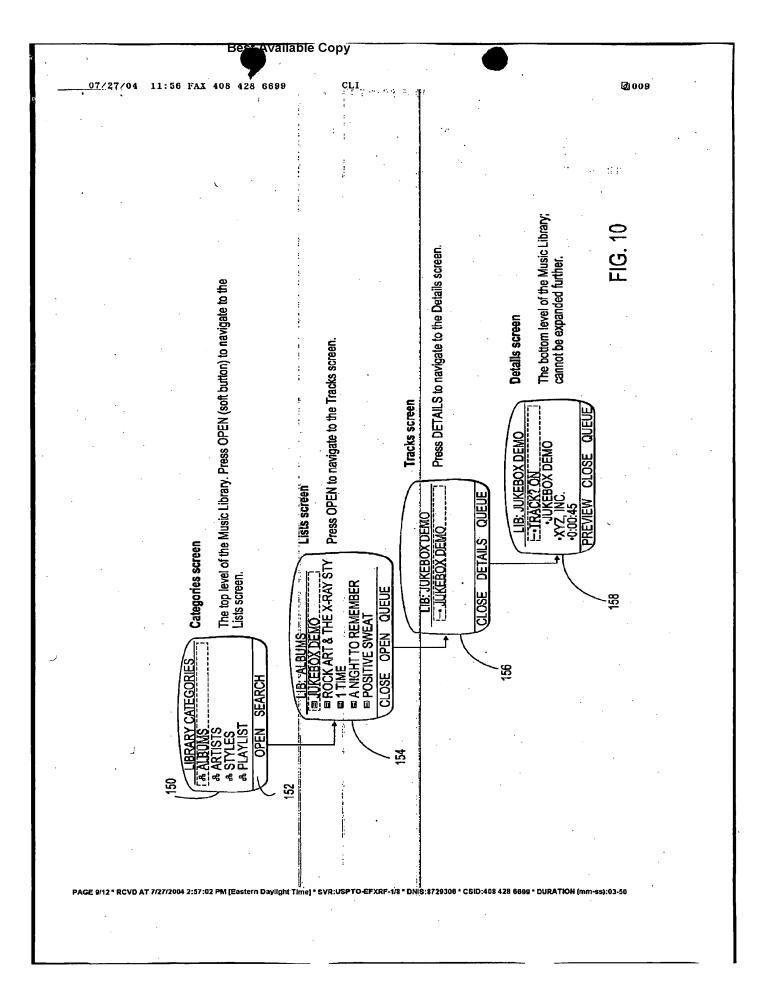
Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

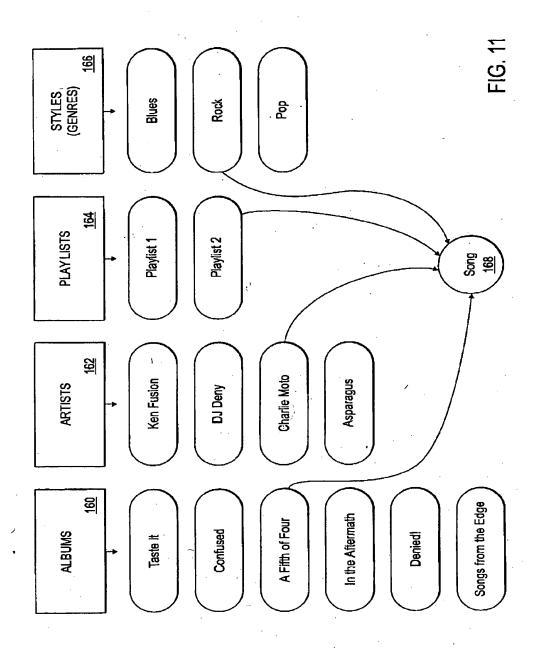
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iG. 12

1. Press SCROLL UP/DOWN buttons to select ALBUMS.

1. Press SEARCH to access the SEARCH FOR ALBUMS screen.

2. Press SEARCH to access the SEARCH FOR ALBUMS screen.

4. STATEST

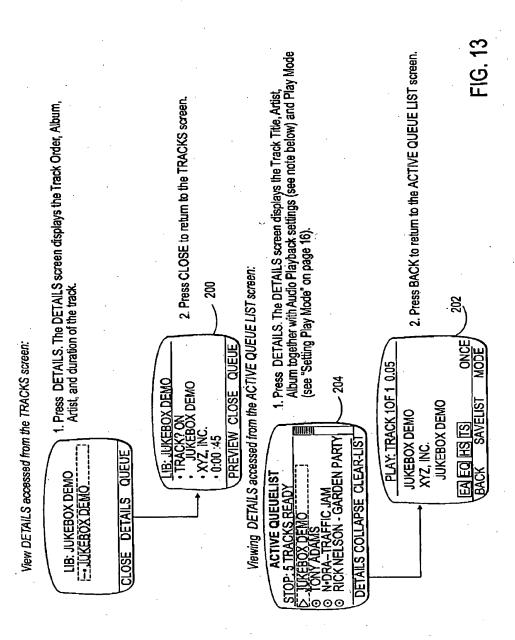
A. STATEST

A. STATEST

A. Search for Albums

1. Press PLUSANINUS to change the letter and then press the SCROLL UP/DOWN buttons to move the SCROLL UP/DOW

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8) [6 [99] PART B - FEE(S) TRANSMITTAL

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APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFRMATION NO. 09/755,723 01/05/2001 Ron Goodman 017002022500 3728 TITLE OF INVENTION: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA APPLN. TYPE SMALL ENTITY ISSUE FEE PUBLICATION FEE TOTAL FEE(S) DUE DATE DUE nonprovisional NO \$1330 \$300 \$1630 09/09/2004 EXAMINER ART UNIT CLASS-SUBCLASS RONES, CHARLES 2175 707-104100 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 12. For printing on the patent front page, list (1) the names of or a find find the names of up to 3 registered patent attorneys or agents OR, alternatively, a the theory of the name of a find find the names of up to 2 registered patent attorneys or agents OR, alternatively, and the names of up to 2 registered patent attorneys or agents OR, alternatively as a member a required. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment have been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE Creative Technology LTD PLEASE NOTE: Unless an assignee category or categories (will not be printed on the patent); Individual 12 corporation or other private group entity government in the patent of Fee(s): 9 Issue Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 9 Publication Fee 10 Advance Order - # of Copies 11 PLE ORDER TO STATE OR COUNTRY) 12 Individual 12 corporation or other private group entity government in the patent private group entity government in the patent private group entity government in the patent provided and provided and provided fee(s) or credit any overpayment, included the patent provided fee(s) or credit any overpaym					Cynthio	L K. Dawn	(Signature)
O9/755,723 O1/05/2001 Ron Goodman O17002022500 3728 O17012 OF INVENTION: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA APPLN. TYPE SMALL ENTITY ISSUE FEE PUBLICATION FEE TOTAL FEE(S) DUE DATE DUE ONOPPOYSIONAL EXAMINER ART UNIT CLASS-SUBCLASS RONES, CHARLES 2175 707-101400 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (22) the name of a single datomey or agents OR, alternatively, (22) the name of a single datomey or agents OR, alternatively, (22) the name of a unit of the Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignce is identified below, no assignce data will appear on the patent, Inclusion of assignee data is only appropriate when an assignment he been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE Creative Technology LTD Singapore Please check the appropriate assignee category or categories (will not be printed on the patent). Dindividual 20 corporation or other private group entity					August 12	2004	(Date)
APPLN. TYPE SMALL ENTITY ISSUE FEE PUBLICATION FEE TOTAL FEE(S) DUE DATE DUE nonprovisional NO \$1330 \$300 \$1630 09/09/2004 EXAMINER ART UNIT CLASS-SUBCLASS RONES, CHARLES 2175 707-104100 1. Change of correspondence address or indication of "Fee Address" (37 agents of Correspondence address or indication of "Fee Address" (37 agents of Correspondence address for Change of Corr	APPLICATION NO.	FILING DATE	1	FIRST NAMED IN	VENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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RONES, CHARLES 2175 707-104100 2. For printing on the patent front page, list (1) the names of or up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered patent attorneys or agents. If no name is listed, no name will be printed. 2. For printing on the patent front page, list (1) the names of or up to 3 registered patent attorneys or agents OR, alternatively, (2) the names of a single firm (having as a member a registered patent attorney or agents of up to 2 registered patent attorney or agents. If no name is listed, no name will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment have per previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) Creative Technology LTD Singapore lease check the appropriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity governme a. The following fee(s) are enclosed: 4b. Payment of Fee(s): 2c) Issue Fee 2d) A check in the amount of the fee(s) is enclosed. 2d) Publication Fee 2d) A check in the amount of the fee(s) is enclosed. 2d) Payment by credit card. Form PTO-2038 is attached. 2d) The Director is hereby authorized by charge the required fee(s), or credit any overpayment, enclose an extra copy of this form).	APPLN. TYPE	SMALL ENTITY	ISSUE FEE		PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
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Creative Technology LTD Creative Technology LTD Singapore	. Change of correspondenc CFR 1.363).	e address or indication of "Fe	ee Address" (37	names of up	to 3 registered patent a	ttorneys or 1 Russel	1 N. Swerdon
The Address" indication (or "Fee Address" Indication form PTO/SB47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment have been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) Creative Technology LTD Singapore lease check the appropriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity of government and propriate assignee category or categories (will not be printed on the patent.) Advance or entity of the corporation or other private group entity of the corporation or other private	☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/共2) attached.			firm (having	as a member a registered	attorney or 2Creati	ve Technology L
PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment have previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) Creative Technology LTD Singapore Please check the appropriate assignee category or categories (will not be printed on the patent); individual corporation or other private group entity government a. The following fee(s) are enclosed: Ab. Payment of Fee(s): A check in the amount of the fee(s) is enclosed. Payment by credit card. Form PTO-2038 is attached. Advance Order - # of Copies	☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer			attorneys or a	igents. If no name is liste		
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☑ Issue Fee ☑ A check in the amount of the fee(s) is enclosed. ☑ Publication Fee ☐ Payment by credit card. Form PTO-2038 is attached. ☐ Advance Order - # of Copies	lease check the appropriate	assignee category or catego	ries (will not be pri	inted on the pater	nt); 🚨 individual 🙇	corporation or other private g	roup entity 🚨 government
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Authorized Signature) (Date) Aug. 12, 2004						· · · · · · · · · - ·	

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Date of Deposit: August 12, 2004

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REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY AND

CHANGE OF CORRESPONDENCE ADDRESS

Application Number	09/755,723		
Filing Date	1/5/2001		
First Named Inventor	GOODMAN et al.		
Art Unit	2175		
Examiner Name	Rones, Charles		
Attorney Docket Number	6407P212		

I hereby revok	ce all prev	ious powers	of attorney giv	en in the ab	ove-identifi	ied application	n.	
A Power	r of Attorn	ey is submitte	ed herewith.					
OR X I hereby appoint the practitioners associated with the Customer Number: 40032								40032
X Please o	change the	e correspond	ence address	for the abo	ve-identifie	ed application	to:	
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	cant/Invent	or.						
X Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)								
		SIG	NATURE of A	pplicant or A	ssignee of	Record		
Name	Chon Ho	ck Leow -	. /					
Signature			honton	When				
Date	7/6/04/ Telephone (408) 428-6600							
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STATE	MENT UNDER 37 CFR 3.73(b)
Applicant/Patent Owner: <u>CREATIVE TECHNOLC</u>	DGY LTD.
	Filed/Issue Date: <u>1/5/2001</u>
Entitled: AUTOMATIC HIERARCHICAL CATEO	GORIZATION OF MUSIC BY METADATA
CREATIVE TECHNOLOGY LTD.	, a <u>CORPORATION</u> ,
(Name of Assignee)	(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)
states that it is: 1. X the assignee of the entire right, title, and int	erest; or
2. an assignee of less than the entire right, title The extent (by, percentage) of its ownership in the patent application/patent identified above by	o interest is %
A. [X] An assignment from the inventor(s) of the in the United States Patent and Trademark Office a	patent application/patent identified above. The assignment was recorded t Reel/Frame <u>011788/0174</u> , or for which a copy thereof is attached.
OR	
B. [] A chain of title from the inventor(s), of the shown below:	patent application/patent identified above, to the current assignee as
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keel, Flame	, or for which a copy thereof is attached.
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[] Additional documents in the chain of title	e are listed on a supplemental sheet.
[] Copies of assignments or other documents in [NOTE: A separate copy (i.e., the original as must be submitted to Assignment Division in recorded in the records of the USPTO. See	ssignment document or a true copy of the original document) n accordance with 37 CFR Part 3, if the assignment is to be
The undersigned (whose title is supplied below) is a	authorized to act on behalf of the assignee.
1/9/st	CHON HOCK LEOW
Date	Typed or printed name
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Telephone number	Signature
	CHIEF TECHNOLOGY OFFICER
**	Title

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BEST AVAILABLE COD,

Sent Via First Class U.S. Mail

Application Serial No.: 09/755,723

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF

MUSIC BY METADATA

Attorney Docket No.: 6407P212 (17002-022500US)

First Named Inventor: GOGDMAN

Items enclosed:

Revocation of Beaver of Attorney With New Power of Attorney and Change of Gerrespondence Address (i page); Statement Under 37 CFR 3.73(b) (1 page); and

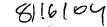
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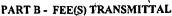
3. Return Receipt Postcard.

Date Deposited: July 7, 2004

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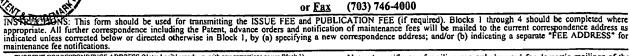




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Cynthia K. Dawn (Signatur Cynthia August 12, 2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	J
09/755 723	01/05/2001	Ron Goodman	017002022500	3728	

TITLE OF INVENTION: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

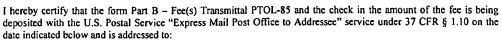
	,					NUR DATE	DUE
APPLN. TYPE	SMALL ENTITY	ISSUE FEE		PUBLICATION FEE	TOTAL FEE(S)		DATE DUE
nonprovisional	NO	\$1330		30 \$300		09/09/	/2004
EXAMINER		ART UNIT		CLASS-SUBCLASS			
RONES,	CHARLES	2175	1.7	707-104100			
1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/#2) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed no name				
3. ASSIGNEE NAME AND PLEASE NOTE: Unless been previously submitted	D RESIDENCE DATA TO E s an assignee is identified be ed to the USPTO or is being	low, no assignee data submitted under separa	will appe ate cover.	ar on the patent. Inclusion of Completion of this form is ?	of assignee data is only NOT a substitute for file	appropriate when an a	ssignment has
(A) NAME OF ASSIGN	nnology LTD		Singa	•			O covernment
	le assignee category or category		ed on the		corporation or other	private group entity	government
4a. The following fee(s) are	e enciosea:		•	in the amount of the fee(s) is	enclosed		
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Date of Deposit: August 12, 2004







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APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

09/755,723

01/05/2001

Ron Goodman

017002022500

CONFIRMATION NO. 3728

OC000000013550953

08791 **BLAKELY SOKOLOFF TAYLOR & ZAFMAN** 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030

Date Mailed: 08/16/2004

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2004.

• The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

OPPD ()-

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SONY Exhibit 1003 - Page 267







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www.uspto.gov

FIRST NAMED APPLICANT APPLICATION NUMBER FILING OR 371 (c) DATE ATTY. DOCKET NO./TITLE

09/755,723

CREATIVE LABS, INC.

LEGAL DEPARTMENT 1901 MCCARTHY BLVD MILPITAS, CA 95035

40032

01/05/2001

Ron Goodman

017002022500

CONFIRMATION NO. 3728

OC000000013550969

Date Mailed: 08/16/2004

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2004.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

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CENTRAL FAX CENTER

2001

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CREATIVE LABS, INC. 1901 McCarthy Boulevard, Milpitas, CA 95035 (408) 428-6600

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FACSIMILE COVER SHEET

To: Examiner Charles Rones

From: Russell N. Swerdon

Art Unit 2175

Phone: (408) 546-6417

US Patent & Trademark Office

Fax: (408) 428-6699

Mobile: (925) 639-8311

E-mail: rswerdon@creativelabs.com

Fax: (703) 872-9306

Date: November 10, 2004

Phone: (571) 272-4085

Pages: 1

(including cover sheet)

RE: USSN 09/755,723 filed 1/05/2001, Goodman et al.

Examiner Rones,

This is to confirm the interview to be held on November 16, 2004 at 2:30 pm in the Randolph Building. Please let us know immediately if there are any changes to your schedule, as we are travelling from California.

Regards

Robbll

Russell N. Swerdon Reg. No. 36,943

CORPORATE FACSIMILE NUMBERS

LEGAL/EXECUTIVE: (408) 428-6699

Please call (408) 546-6955 or (408) 546-6944 if you experience trouble with this transmission.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): GOODMAN, et al

Application No.: 09/755,723

Filed: 1/5/2001

Title: AUTOMATIC HIERARCHICATAN

CATEGORIZATION OF MUSIC BY

METADATA

Art Unit:

2175

Examiner:

Charles L. RONES

Attorney Docket No.: 6407P212

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

FORMAL DRAWING TRANSMITTAL LETTER

Dear Sir:

Enclosed herewith please find five sheets of formal drawings (Figs 9-13) in substitution for the identically numbered formal drawings previously submitted by fax. Applicants were informally notified that several of the formal drawings previously submitted by fax were of poor quality. Please substitute these formal drawings for the corresponding poor quality drawings previously filed.

Entry of these drawings is respectfully requested.

Dated: ///3.09

Russell N. Swerdon Reg. No. 36943

1901 McCarthy Boulevard Milpitas, CA 95035 Tel. (408) 546-6104 Fax (408) 428-6699



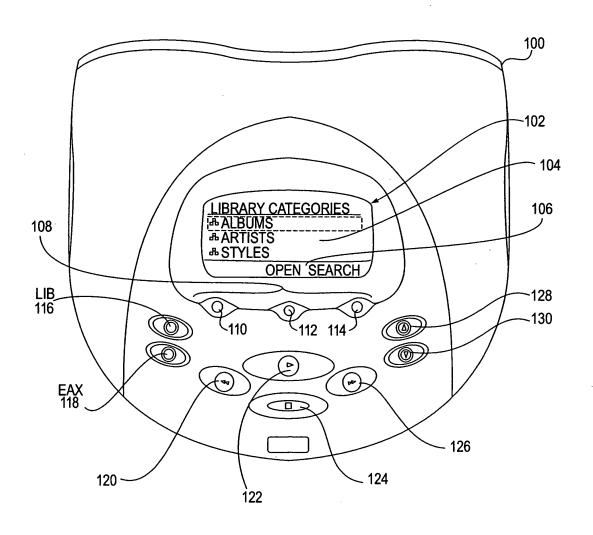
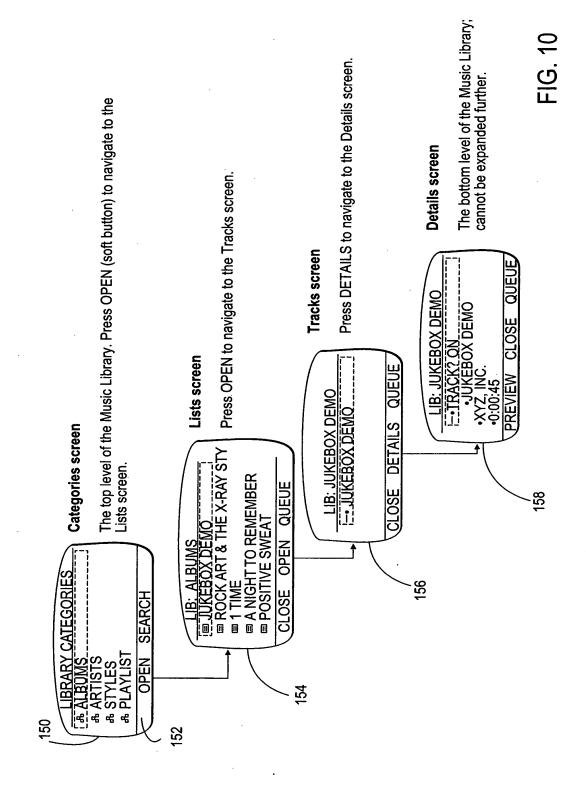
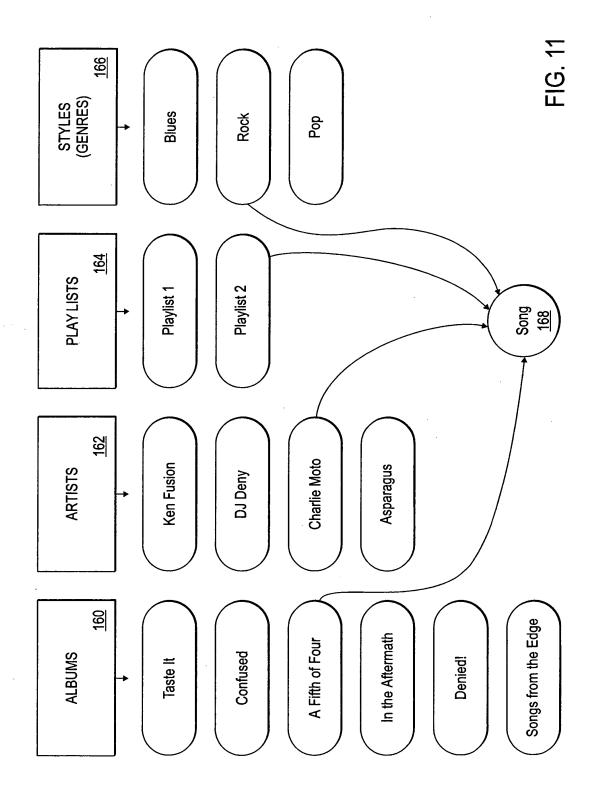
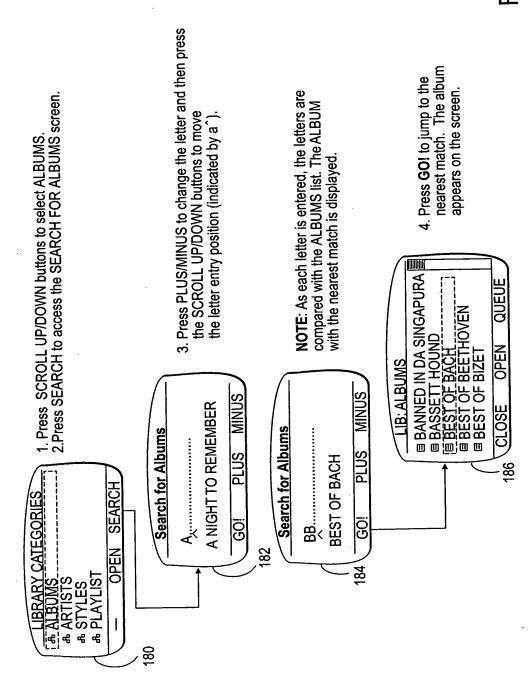


FIG. 9







View DETAILS accessed from the TRACKS screen:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Goodman, et al

Attorney Docket No.: 6407P212

Application No.: 09/755,723

Filed: January 5, 2001

Examiner: Rones, Charles L.

Group: 2175

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Declaration from Practitioner re Amendatory Material

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

- I, Russell N. Swerdon, declare as follows:
- 1. I am the an attorney employed by Creative Labs, Inc. and am one of the attorneys of record for assignee Creative Technology Ltd. with respect to the above entitled patent application. I have reviewed the file in this matter including the application filed on or about Jan. 5, 2001, and the application entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," also filed on Jan. 5, 2001, and assigned application serial number 09/755,629. Based on my review of the records I can make the following statements either based on personal knowledge or upon information and belief.
- 2. The currently pending application, application serial number 09/755,723, incorporated by reference the application entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," also filed on Jan. 5, 2001, and assigned application serial number 09/755629.

USSN: 09/755,723

Atty Dkt No.:

- 3. On or about April 30, 2004 a substitute specification was submitted in an amendment filed with the PTO. The amendment also included new drawings, FIGS. 9-14 which were submitted rather than relying upon their previous incorporation by reference. The amendatory material as provided in the substitute specification, included FIGS. 9-14, constitutes the same material incorporated by reference in the referencing application.
- 4. I hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 11.16.04

Signature

Russell N. Swerdon

Respectfully submitted,

Russell N. Swerdon Registration No. 36,943

Creative Labs, Inc. 1901 McCarthy Blvd. Milpitas, CA 95035 (408) 428-6600



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

VS

PATENT

In re application of: Goodman, et al

Application No.: 09/755,723

Filed: January 5, 2001

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Attorney Docket No.:

6407P212

Examiner: Rones, Charles L.

Group: 2175

Declaration from Practitioner re Amendatory Material

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

- I, Russell N. Swerdon, declare as follows:
- 1. I am the an attorney employed by Creative Labs, Inc. and am one of the attorneys of record for assignee Creative Technology Ltd. with respect to the above entitled patent application. I have reviewed the file in this matter including the application filed on or about Jan. 5, 2001, and the application entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," also filed on Jan. 5, 2001, and assigned application serial number 09/755,629. Based on my review of the records I can make the following statements either based on personal knowledge or upon information and belief.
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USSN: 09/755,723

Atty Dkt No.:

- 3. On or about April 30, 2004 a substitute specification was submitted in an amendment filed with the PTO. The amendment also included new drawings, FIGS. 9-14 which were submitted rather than relying upon their previous incorporation by reference. The amendatory material as provided in the substitute specification, included FIGS. 9-14, constitutes the same material incorporated by reference in the referencing application.
- 4. I hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 11.16.04

Signature

Russell N. Swerdon

Respectfully submitted.

Registration No. 36,943

Creative Labs, Inc. 1901 McCarthy Blvd. Milpitas, CA 95035 (408) 428-6600

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): GOODMAN, et al

Application No.: 09/755,723

Filed: 1/5/2001

Title: AUTOMATIC HIERARCH CATALO

CATEGORIZATION OF MUSIC BY

METADATA

Attorney Docket No.: 6407P212

Art Unit:

2175

Examiner:

Charles L. RONES

y 28

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

FORMAL DRAWING TRANSMITTAL LETTER

Dear Sir:

Enclosed herewith please find five sheets of formal drawings (Figs 9-13) in substitution for the identically numbered formal drawings previously submitted by fax. Applicants were informally notified that several of the formal drawings previously submitted by fax were of poor quality. Please substitute these formal drawings for the corresponding poor quality drawings previously filed.

Entry of these drawings is respectfully requested.

Russell N. Swerdon Reg. No. 36943

1901 McCarthy Boulevard Milpitas, CA 95035 Tel. (408) 546-6104 Fax (408) 428-6699



59785723 RZS

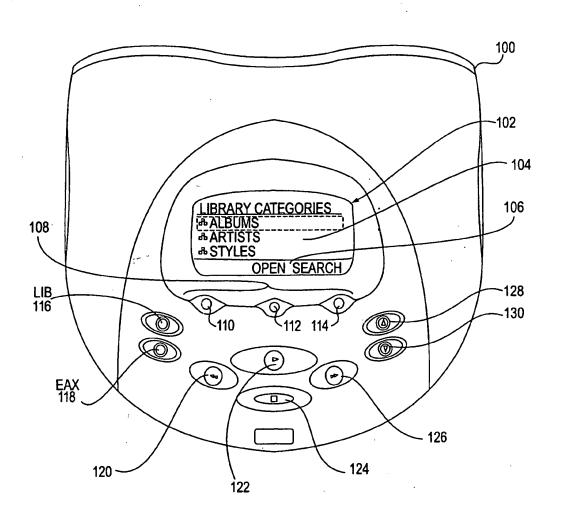
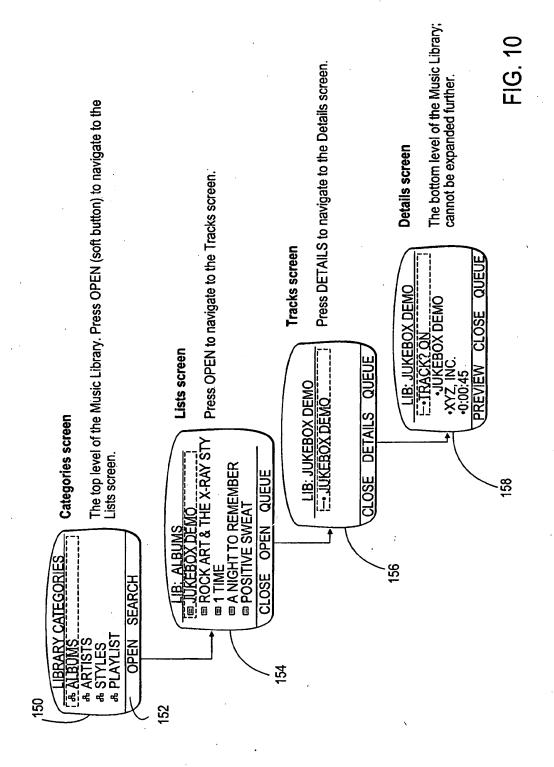
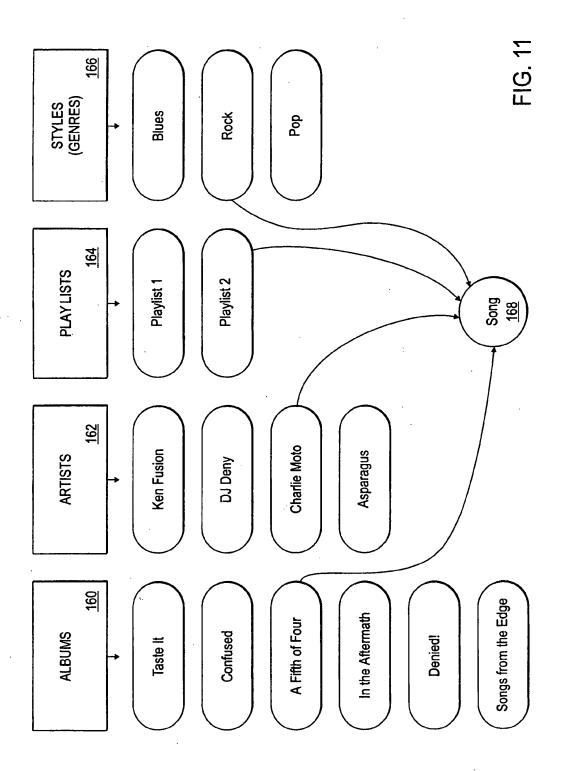
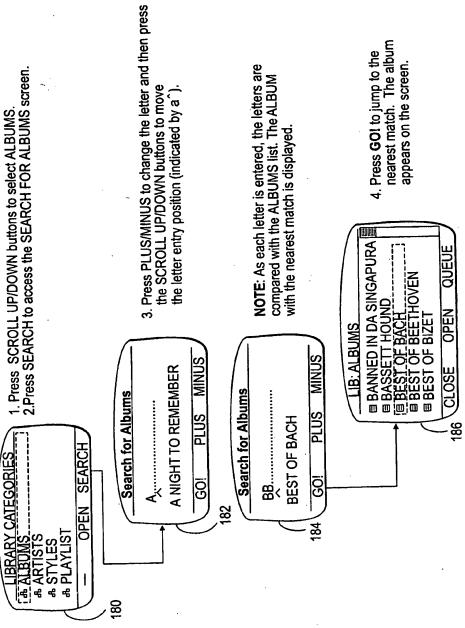
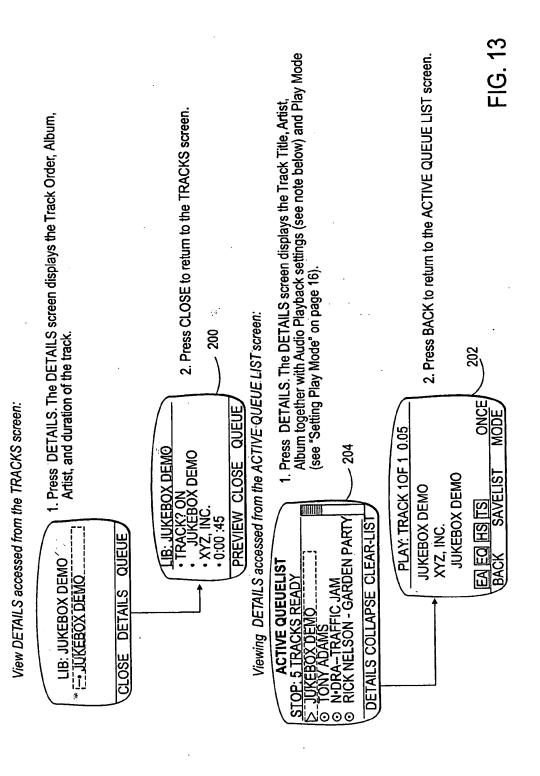


FIG. 9











IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Goodman, et al

Attorney Docket No.:

6407P212

Application No.: 09/755,723

Examiner: Rones, Charles L.

Filed: January 5, 2001

Group: 2175

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

FORMAL DRAWING TRANSMITTAL LETTER

Sir:

Enclosed herewith please find 1 sheet of formal drawing(s) including FIG. 14. Please substitute this formal drawing for the informal FIG. 14 drawing, originally filed with the amendment (including substitute specification) mailed on or about April 30, 2004.

Please add this sheet to the formal drawing sheets corresponding to FIGS. 1-8 (previously approved) and the recently filed (November 16, 2004) formal drawing sheets pertaining to FIGS. 9-13.

Applicants respectfully request that the Examiner approve entry of this formal drawing. If any others of the formal drawings in the group of Figures 1-14 are not currently approved, then applicants further request that the Examiner approve entry of those drawings.

Respectfully submitted.

Russell M. Swerdon Registration No. 36,943

Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

CERTIFICATE OF EXPRESS MAIL (37 C.F.R. § 1.10)

Express Mail No.: EV 413 048 674 US

Date: 11/19/2004

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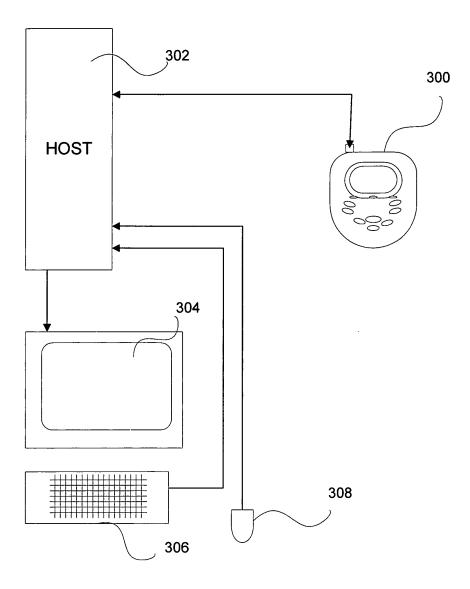


FIG. 14



11-22-04



94/2175

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Goodman, et al

Attorney Docket No.:

6407P212

Application No.: 09/755,723

Examiner: Rones, Charles L.

Filed: January 5, 2001

Group: 2175

Title: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

Mail Stop Issue Fee Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

FORMAL DRAWING TRANSMITTAL LETTER

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Respectfully submitted,

Russell N. Swerdon

Registration No. 36,943

Creative Labs, Inc. 1901 McCarthy Boulevard Milpitas, CA 95035 (408) 428-6600

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VA 22313-1450

Date of Deposit: 11/19/04





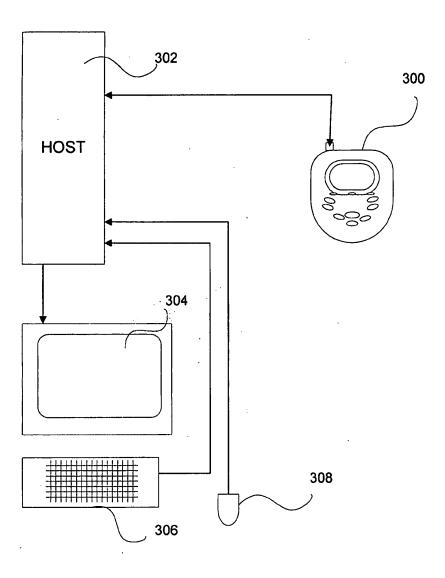


FIG. 14









UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

FIRST NAMED INVENTOR ATTORNEY DOCKET NO. APPLICATION NO. FILING DATE CONFIRMATION NO. 09/755,723 01/05/2001 017002022500 3728 Ron Goodman 40032 7590 02/08/2005 EXAMINER CREATIVE LABS, INC. RONES, CHARLES LEGAL DEPARTMENT ART UNIT PAPER NUMBER 1901 MCCARTHY BLVD MILPITAS, CA 95035 2164

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Response to Rule 312 Communication	09/755,723	GOODMAN ET AL.	
Response to Rule 312 Communication	Examiner	Art Unit	
	Charles Rones	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

1. 🛛 The	amendment filed on <u>July 27, 2004</u> under 37 CFR 1.312 has been considered, and has been:
a) 🗌	entered.
b) 🛚	entered as directed to matters of form not affecting the scope of the invention.
c) 🗌	disapproved because the amendment was filed after the payment of the issue fee.
	Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1)
	and the required fee to withdraw the application from issue.
d) 🗌	disapproved. See explanation below.
e) 🗌	entered in part. See explanation below.

Charles Rones Primary Examiner Art Unit: 2164



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.usplo.gov

APPLICATION NO.	FII	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/755,723	0	1/05/2001	Ron Goodman	017002022500	017002022500 3728	
40032 7590 03/03/2005 CREATIVE LABS, INC. LEGAL DEPARTMENT 1901 MCCARTHY BLVD MILPITAS, CA 95035			EXAMINER			
		,	RONES, CHARLES			
				ART UNIT	PAPER NUMBER	
			2164			

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Suff Notice of Allowability

Application No.	Applicant(s)	
09/755,723	GOODMAN ET AL.	
Examiner	Art Unit	
Charles Rones	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. This communication is responsive to <u>drawing replacement sheets filed 11-16-04, 11-19-04 and 7-27-04.</u> 2. The allowed claim(s) is/are 24-39. 3. The drawings filed on 11-16-04, 11-19-04 and 7-27-04 are accepted by the Examiner. 4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some* c) ☐ None of the: 1.
☐ Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. _ 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) I including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application (PTO-152) 2. Notice of Draftperson's Patent Drawing Review (PTO-948) 6. Interview Summary (PTO-413), Paper No./Mail Date 3. Information Disclosure Statements (PTO-1449 or PTO/SB/08), 7. Examiner's Amendment/Comment Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit 8. Examiner's Statement of Reasons for Allowance of Biological Material 9. Other ____. Charles Rones

Primary Examiner Art Unit: 2164

J.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

Notice of Allowability

Part of Paper No./Mail Date 03012005

FEE TRANSMITTAL

Electronic Version v10

Stylesheet Version v10

Title of Invention

Automatic Hierarchical Categorization of Music by Metadata

Application Number: 09/755723

Date: 2001-01-05

First Named Applicant: Mr. Ron Goodman
Attorney Docket Number: 017002022500

Art Unit: 2164

Examiner: Mr. Charles Rones

TOTAL FEE AUTHORIZED \$ 180

Patent fees are subject to annual revisions on or about October 1st of each year.

Fee Description	Fee Code	Amount \$	Fee Paid \$
Submission Of Information Disclosure Stmt Fee	1806	180	180

AUTHORIZED BILLING INFORMATION

The commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit account number: 503302

Access Code ****

Deposit name: Creative Labs, Inc.

Deposit authorized name: Mr. Russell Nicholas Swerdon

Signature: /russell swerdon/

Date (YYYYMMDD): 2005-08-08

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention

Automatic Hierarchical Categorization of Music by Metadata

Application Number: 09/755723

Confirmation Number: 3728

First Named Applicant: Ron Goodman
Attorney Docket Number: 017002022500

Art Unit: 2164

Examiner: Mr. Charles Rones

Search string: (5864868 or 5530235 or 5355302 or 5870710 or 6182126 or 5481509 or 5914941

).pn

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	5864868	1999-01-26	Contois			
	2	5530235	1996-06-25	Stefik et al.			
	3	5355302	1994-10-11	Martin et al.			
	4	5870710	1999-02-09	Ozawa et al.			
	5	6182126	2001-01-30	Nathan et al.			
	6	5481509	1996-01-02	Knowles			
	7	5914941	1999-06-22	Janky			

Signature

Examiner Name	Date

TRANSMITTAL

Electronic Version v1.1

Stylesheet Version v1.1.0

Title of Invention	Automatic Hierarchical Categorization of Music by Metadata	
Application Number	99/755723	
Date :	2001-01-05	
First Named Applica	nt: Mr. Goodman Ron	
Confirmation Number	r: 3728	
Attorney Docket Nu	nber: 017002022500	

I hereby certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.

I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.

Submitted By:	Elec. Sign.	Sign. Capacity
Mr. Russell Nicholas Swerdon	/russell swerdon/	Attorney
Registered Number: 36,943		

Documents being submitted:	Files	
us-fee-sheet	IDS17002022500-usfees.xml	
	us-fee-sheet.xsl	
	us-fee-sheet.dtd	
us-ids	IDS17002022500-usidst.xml	
	us-ids.dtd	
	us-ids.xsl	
Comments		

ACKNOWLEDGEMENT RECEIPT

Electronic Version 1.1

Stylesheet Version v1.1.1

Title of Invention

Automatic Hierarchical Categorization of Music by Metadata

Submision Type: Information Disclosure

Statement

Application Number:

09/755723

90083

EFS ID: Server Response:

Confirmation Message Code ISVR1 Submission was successfully submitted -Even if Informational or Warning Messages appear below, please do not resubmit this application 3728 ICON1 USPTOEFSNot Fer assistance with e-filing a patent application, contact the Patent Electronic

Business Center: Toll-Free Number:1(866) 217-9197 Website: http://www.uspto.gov/ebc/

First Named Applicant: Ron Goodman Attorney Docket Number: 017002022500

2005-08-08 18:31:02 EDT Timestamp:

From: us

File Listing:

Doc. Name	File Name	Size (Bytes)	Date
			Produced
			(yyyymmdd)
us-fee-sheet	IDS17002022500-usfees.xml	1491	2005-08-08
us-fee-sheet	us-fee-sheet.xsl	25930	2005-08-08
us-fee-sheet	us-fee-sheet.dtd	11968	2005-08-08
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package-data	package-data.dtd	27025	2005-08-08
package-data	us-package-data.xsl	19263	2005-08-08
	Total files size	109627	

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Name:

cn=Russell Nicholas Swerdon.,ou=Registered Attorneys,ou=Patent and

Trademark

Office,ou=Department of Commerce,o=U.S. Government,c=US





09/755,723UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

DATE:

March 20, 2006

TO:

Certificates of Correction Branch

FROM:

Charles Rones

SPE, Art Unit 2164

SUBJECT: REQUEST FOR CERTIFICATE OF CORRECTION

Please issue a Certificate of Correction in U. S. Letters Patent No. 6,928,433 as specified on the attached Certificate.

Charles Rones, SPE

Art Unit 2164

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE

Patent No. 6,928,433 B2

Patented: August 9, 2005

On petition requesting issuance of a certificate for correction of inventorship pursuant to 35 U.S.C. 256, it has been found that the above identified patent, through error and without any deceptive intent, improperly sets forth the inventorship.

Accordingly, it is hereby certified that the correct inventorship of this patent is: Ron Goodman, Santa Cruz, CA (US); Howard N. Egan, Capitola, CA (US); David Bristow, Bainbridge Island, WA (US)

Signed and Sealed this Sixteenth Day of May 2006.

Charles Rones
Supervisory Patent Examiner
Art Unit 2164

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE

Patent No. 6,928,433 B2

Patented: August 9, 2005

On petition requesting issuance of a certificate for correction of inventorship pursuant to 35 U.S.C. 256, it has been found that the above identified patent, through error and without any deceptive intent, improperly sets forth the inventorship.

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> Charles Rones Supervisory Patent Examiner Art Unit 2164

> > SONY Exhibit 1003 - Page 302



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandra, Virginia 22313-1450
www.uspto.gov

DATE MAILED: 04/11/2006

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 09/755,723 01/05/2001 Ron Goodman 017002022500 40032 7590 04/11/2006 EXAMINER CREATIVE LABS, INC. RONES, CHARLES LEGAL DEPARTMENT ART UNIT PAPER NUMBER 1901 MCCARTHY BLVD MILPITAS, CA 95035

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.usplo.go

In re Patent No. GOODMAN ET AL.

Issue Date: August 9, 2005 Appl No.: 09/755,723 Filed: January 05, 2001

For: AUTOMATIC HIERARCHICAL

CATEGORIZATION OF MUSIC BY

METADATA

DECISION GRANTING

PETITION

37 CFR 1.324

This is a decision on the petition under 37 CFR 1.48, filed July 9, 2004. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is granted.

The patented file is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

Charles Rones

Supervisory Patent Examiner

Art Unit 2164

Patent Examining Group 2100

CREATIVE LABS, INC. LEGAL DEPARTMENT 1901 MCCARTHY BLVD MILPITAS, CA 95035

UNITED STATES PATENT AND TRADEMARK OFFICE Certificate

Patent No. 6,928,433 B2

Patented: August 9, 2005

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Signed and Sealed this Sixteenth Day of May 2006.

CHARLES RONES Supervisory Patent Examiner Art Unit 2164



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

Patent No. 6,928,433

NOTICE OF INTER PARTES REEXAMINATION

Notice is hereby given that a request for *inter partes* reexamination of U.S. Patent No. **6,928,433** was filed on **12/01/2009** under 35 U.S.C. § 311 and 37 C.F.R. § 1.913.

The reexamination proceeding has been assigned Control No. 95/001,274.

This Notice incorporates by reference into the <u>patent file</u>, all papers entered into the reexamination file.

Note: This Notice should be entered into the patent file.

GENERAL POWER OF ATTORNEY TO PROSECUTE APPLICATIONS AND REEXAMINATION PROCEEDINGS BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby appoint: Practitioners associated with the Customer Number 22850 as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications and reexamination proceedings assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b). Please change the correspondence address for the application or reexamination proceeding identified in the attached statement under 37 CFR 3.73(b) to the address associated with Customer Number 22850.						
Assignee Name and Address:						
CREATIVE TECHNOLOGY LTD 31 International Business Park Creative Resources Singapore 609921 Singapore						
A statement under 37 CFR 3.73(b) is attached.						
SIGNATURE OF ASSIGNEE OF RECORD The individual whose signature and title is supplied below is authorized to act on behalf of the assignee						
ignature / horflich/hm Date: May 1st 2012						
ame Chon Hock Leow Telephone: 408-432-6700						
itle Chief Technology Officer						

OBLON, SPIVAK McCLELLAND, MAIER & NEUSTADT, L.L.P. [07/2009]

Docket No. 397709US91RX

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE REEXAMINATION OF U.S. PATENT NO. 6,928,433

INVENTOR(S):

Ron GOODMAN, et al.

CONTROL

95/001,274

NO:

FILED:

December 1, 2009

FOR:

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY

METADATA

CONFIRMATION OF ATTORNEY AND CORRESPONDENCE ADDRESS

COMMISSIONER FOR PATENTS ALEXANDRIA, VIRGINIA 22313

Commissioner:

The undersigned hereby confirms the attorneys of record for the above-identified reexamination proceeding as those appearing in the General Power of Attorney filed herewith, and accordingly requests the appropriate attorneys of record be noted, and the correct correspondence address be entered for this reexamination proceeding as the address associated with Customer Number:

22850

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,

MAIER & NEUSTADT, L.L.P.

Scott A. McKeown

Registration No. 42,866

Customer Number

22850

Tel. (703) 413-3000 Fax. (703) 413-2220 (OSMMN 07/09)

STATEMENT UNDER 37 CFR 3.73(b)					
Applicant/Patent Owner: Ron GOODMAN, et al.					
Control No./Patent No.: 95/001,274	Filed/Issue Date: December 1, 2009				
Entitled: AUTOMATIC HIERARCHICAL CATEGORIZATION OF	MUSIC BY METADATA				
Creative Technology LTD Corporation					
	signee, e.g., corporation, partnership, government agency, etc.)				
States that it is:					
1. the assignee of the entire right, title, and interest; or					
2. an assignee of less than the entire right, title and interest.					
The extent (by, percentage) of its ownership interest is	%				
in the patent application/patent identified above by virtue of:					
An assignment from the inventor(s) of the patent application/pa in the United States Patent and Trademark Office at Reel <u>0156</u> attached.					
As required by 37 CFR 3.73(b)(1)(i), the documentary evidence assignee was, or concurrently is being, submitted for recordation. The undersigned (whose title is supplied below) is authorized to act	on pursuant to 37 CFR 3.11.				
	5-73-17				
Signature	Date				
Scott A. McKeown	703-412-6297				
Printed or Typed Name - Attorney of Record	Telephone Number				
42,866					
Registration Number	-				



UNITED STATES DEPARTMENT OF COMMERCE UNITED STATES DEFARMENT OF A COMMI United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P. Dex 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE 09/755,723 01/05/2001 Ron Goodman 017002022500

22850 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314

CONFIRMATION NO. 3728 POA ACCEPTANCE LETTER



Date Mailed: 06/05/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/24/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/tcaldwell/ Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES DEPARTMENT OF COMMERCE UNITED STATES DEFARMENT OF A COMMI United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P. Dex 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER 09/755,723

FILING OR 371(C) DATE 01/05/2001

FIRST NAMED APPLICANT Ron Goodman

ATTY. DOCKET NO./TITLE 017002022500

CONFIRMATION NO. 3728 POWER OF ATTORNEY NOTICE

40032 CREATIVE LABS, INC. LEGAL DEPARTMENT 1901 MCCARTHY BLVD MILPITAS, CA 95035



Date Mailed: 06/05/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/24/2012.

• The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/tcaldwell/		

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101