



SOFTWARE PATENTING

FOR TECHNOLOGY AND SERVICE INDUSTRIES

: Its Emergence and Enforceability

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23 FEB 2009

OUTLINES

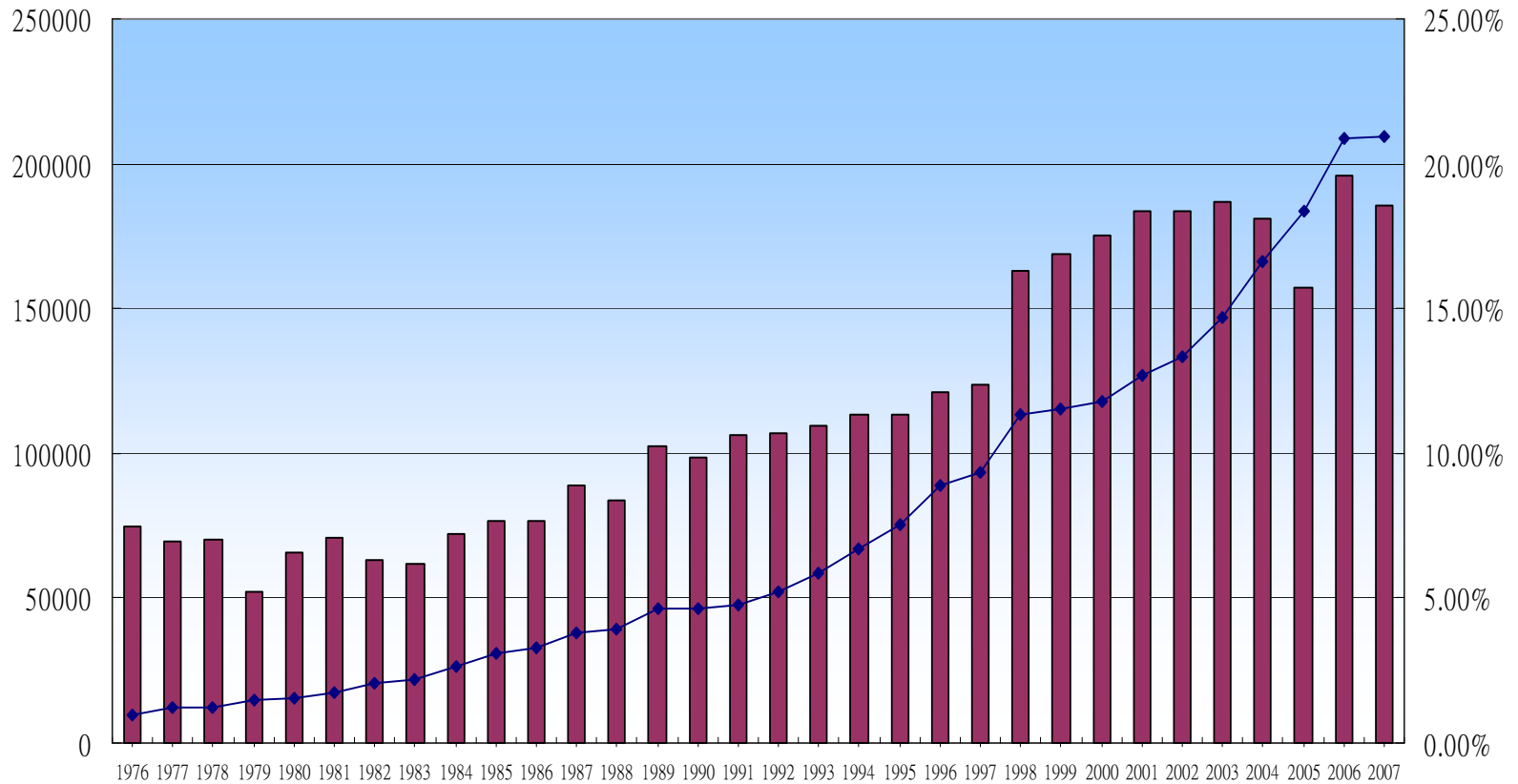
- SW Patenting Activities
- Creative Technology v Apple
 - Technology, Business & Law
 - Value of SW Patent
- Alternative Protective Measures
 - Copyright & Clean Room
 - Provisional Application

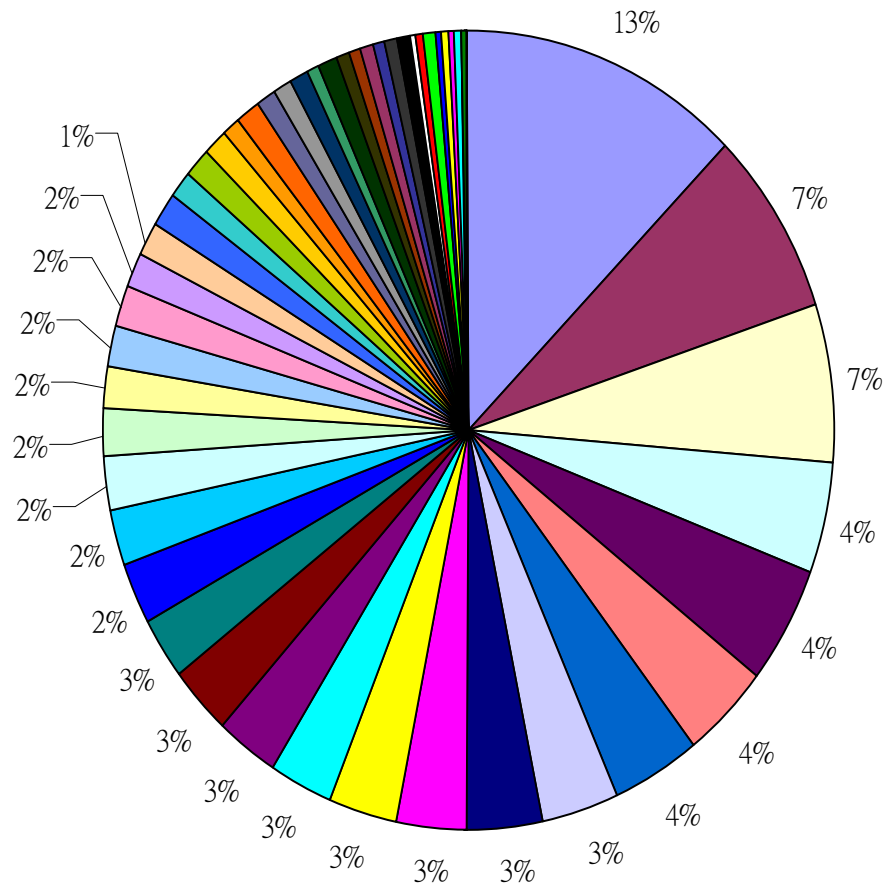


SW Patenting Activities

USPTO

(Total Patent Granted vs. SW Patent Ratio)

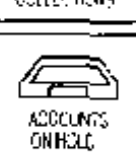




- Networking / Communicat
- Operating Systems
- Image Processing
- Vehicles
- (Graphical) User Interfaces
- Graphics
- Process Control
- Signal Processing
- Office Automation
- Security
- Engineering
- Database
- Optics
- Medical
- Numerical Analysis
- Biological
- Financial
- Distributed Processing
- Digital/Analog Circuit Design
- Speech Recognition/Synthesis
- Pattern Recognition
- Computer Aided Software Engineerin
- Physics
- Navigation
- Word Processing
- Entertainment / Multimedia
- Compression
- Internet
- Object Oriented
- Computer Aided Design
- Chemical
- Games / Gambling
- Geophysical
- Character Recognition
- Neural Networks
- Multiprocessing
- Natural Language Processing

SW Inventions

- **Operating Systems**
 - 4,648,036 Method for controlling query and update processing in a database system
- **Application SW**
 - 5,146,580, Method and system for using expanded memory for operating system buffers and application buffers
- **GUI**
 - 5,956,024 Graphical user interface for customer service representatives for subscriber management systems,
- **Data Structure**
- **Data Compression**
- **Virus Detection**
- **Programming Languages**
- **Computer Readable Medium**
- **etc.**



NAME: **CHFD PUBL** ACCOUNT: **A217834** BRANCH: **ROMEOVILLE** MAP COORD: **020 545**
 ADDRESS: **816 MEMORY LANE** PHONE (H): **(317) 355-1324** OWELING: **SINGLE FAMILY** BRIGGER: **032A**
G-10400 L, 12352 PHONE (W): **(317) 721-2174** FEED TYPE: **BURIED**
 STATUS: **CURRENTLY SERVICED** LICENSE: **3703238** FEED TAG: **0293** DETAILS..

ADVISOR

CALL

HELP **GO BACK** **TUTOR**

ACCOUNT INFORMATION

BILLING

BALANCE DUE: **57.00**
 CURRENT: **57.00** 90: **0.00**
 30: **0.00** 120: **0.00**
 60: **0.00** WRITE OFF: **0.00**

LEDGER

DATE	Q	TITLE	AMOUNT	PG
03/16/95	1	ADDRESSABLE CONVERTER	4.00	
03/16/95	1	NON-ADDRESSABLE CONVERTER	3.00	
03/16/95	1	REMOTE CONTROL	0.50	
03/16/95	1	BASIC	9.95	
03/16/95	1	HBO	12.00	
03/16/95	2	SHOWTIME	13.00	
03/16/95		DUE	72.00	
03/21/95		PAYMENT	25.00	
03/31/95	1	ADDRESSABLE CONVERTER	4.00	
03/31/95	1	NON-ADDRESSABLE CONVERTER	3.00	
03/31/95	1	REMOTE CONTROL	0.50	
03/31/95	1	BASIC	9.95	
03/31/95	1	HBO	12.00	
03/31/95	1	SHOWTIME	13.00	
03/31/95		DUE	72.00	
03/31/95		PAYMENT	25.00	

SERVICES AND EQUIPMENT

SERVICES

Q	TITLE	PRICE	STANDARD	TOTAL
1	EXTENDED BASIC	3.95	9.95	9.95
1	HBO	12.00	12.00	12.00
2	SHOWTIME	3.50	9.50	19.00
3	DISNEY	1.00	1.00	9.00
3	CINEMAX	11.00	11.00	0.00
3	THE MOVIE CHANNEL	11.00	11.00	0.00

EQUIPMENT

TITLE	TYPE	SERIAL	US PRICE
NON-ADDR. CONVERTER	JERROLD HRR2	302973	4.00
ADDRESSABLE CONVERTER	JERROLD HL23	320837	3.00
REMOTE CONTROL	JERROLD RC	400382	0.50

PAY-PER-VIEW

DATE	TITLE	PRICE	STATUS
07/01/95	HOWARD'S END	3.95	VIEWED
07/03/95	NAKED GUN	4.95	VIEWED
07/10/95	FRON WHITE	3.95	VIEWED
08/25/95	WRESTLEMANIA XXV	9.95	VIEWED
03/14/96	A VIEW TO KILL	3.95	VIEWED
05/24/95	HEATHERS	3.95	PENDING

VIEW BILL PAYMENT COLLECTION ARRANGEMENT
CATV PPV/OD INTERACTIVE DISCONNECT

SERVICE LOG

DATE	CALL TYPE	DESCRIPTION	RESULT	CONTACT
01/05/95	TROUBLE CALL	GHOSTING ON LOW CHANNELS	SERVICE CALL	SMITH, J
01/03/95	SPECIAL REQUEST	REMOVAL OF OUTLET	SERVICE CALL	EVANS, K
02/09/95	SPECIAL REQUEST	BURY EXTRA EXPOSED CABLE	SERVICE CALL	JOHNSON, W
02/21/95	TROUBLE CALL	NO SERVICE	REPORTED	SMITH, J
03/09/95	TROUBLE CALL	GHOSTING ON LOW CHANNELS	CSR RESOLVED	JENSEN, L

VIEW INFO SCHEDULE

ACCOUNT SAVE TRouble SHOOT FIND HELP CLOSE EXIT

MARKETING

FREE ALADDIN WALL CLOCK TO NEW SUBSCRIBERS.

30 DAY FREE TRIAL TO NEW CUSTOMERS.

\$36 INSTALLATION IN ROMEOVILLE AND ELMHURST CORPS.

ALERTS

CHANNEL OUTAGE
THE FOLLOWING CHANNELS ARE CUT IN ELMHURST AREAS: WCIU, AND WT

TECHNICIANS ARE WORKING ON THIS AND WE HOPE HAVE THIS PROBLEM RESOLVED BY 5 PM TODAY.

I-BMP: Internet Business Method Patent

- Financial Business Method
- E-Commerce
 - Advertisements
 - Online Sale & Service
 - Incentive Design
 - Credit Card Transactions
 - Information Systems
- Generic Business Methods

- **Financial**
 - 4,346,442, Securities Brokerage-Cash Management System (Merrill Lynch)
- **Advertisement**
 - 5,794,210, Attention Brokerage
- **Online Sale**
 - 5,960,411, Method and system for placing a purchase order via a communications network (Amazon.com, one-click, invalidated?)
- **Incentive Design**
 - 5,689,100, Debit Card System and Method for Implementing Incentive Award Program
- **Info Systems**
 - 5,528,490, Electronic Catalog System and Method
- **Generic**
 - 4,890,228, Electronic Income Tax Refund Early Payment System

Supply Chain Management

- **Hitachi, Ltd.**

- US5,887,154 & US5,999,724 (1999) Business process simulation system
 - A simulation system in a work flow control system confirms whether or not prepared business process defining information is valid.

- **i2 Technologies, Inc., Irving, TX**

- US5,943,244 (1999) System for optimizing a network plan and method of operation
 - The processor is operable to determine whether the network plan violates any of the constraints, modify the network plan in order to resolve a violation of any constraint, and update a corresponding interaction coefficient in order to reflect an impact upon the network plan caused by the resolution of a violation.

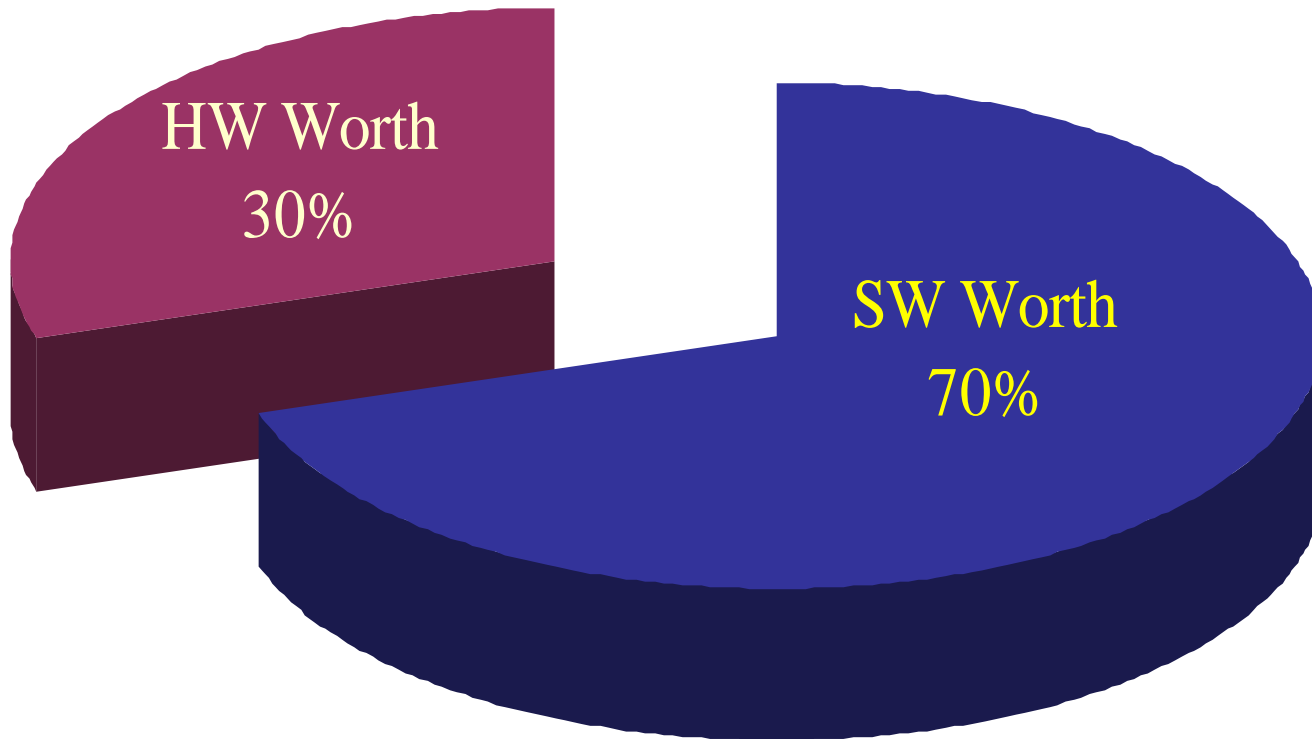


SW Litigation and Case

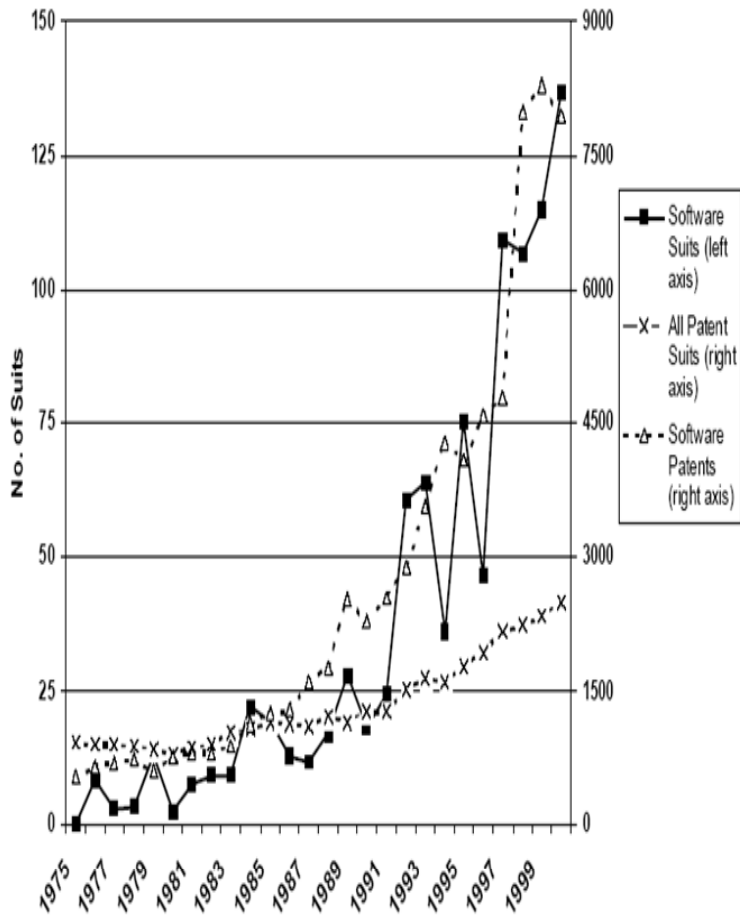
1. Trends
2. Creative v Apple

Global IT Industry

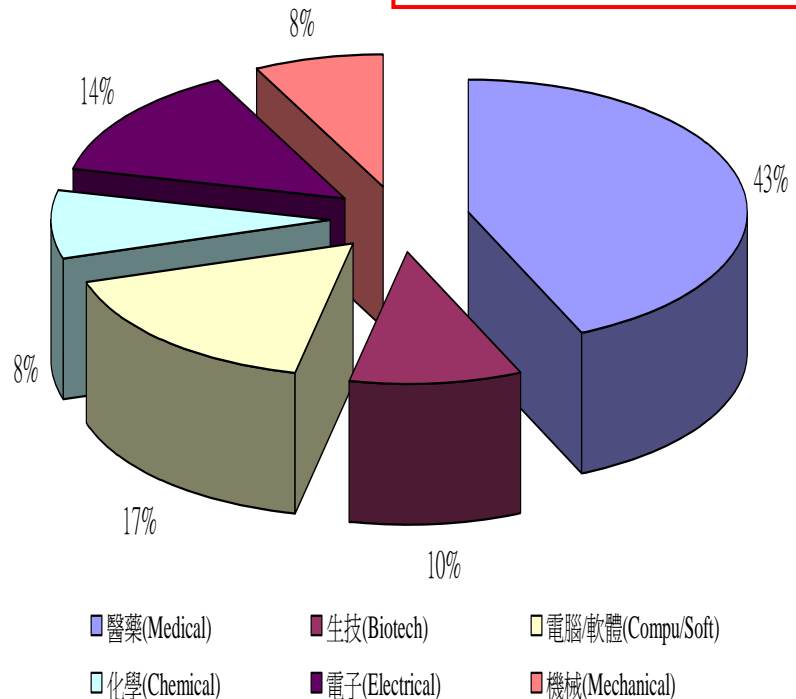
2002-2007 Global Growth Rate
: SW > 7% , HW 2.2% (Gartner)



SW Patent Litigation in US



Computer/SW: 17%
Electrical: 14%



- 醫藥 (Medical)
- 生技 (Biotech)
- 電腦軟體 (Compu/Soft)
- 化學 (Chemical)
- 電子 (Electrical)
- 機械 (Mechanical)



SW Patent Litigation Case

:MP3 Player's User Interface Technology

Creative v. Apple

iPod



- 80GB/30GB
- 20,000 songs/7,500 songs
- 25,000 photos
- 100 hours/40 hours of video
- 20 hours of battery life for songs & 6.5 hours for movies
- Easy to use
- Easy to search

<http://www.apple.com/itunes/>

Creative's US 6,928,433 Patent

(12) **United States Patent**
Goodman et al.

(10) **Patent No.:** **US 6,928,433 B2**
(45) **Date of Patent:** **Aug. 9, 2005**

(54) **AUTOMATIC HIERARCHICAL
CATEGORIZATION OF MUSIC BY
METADATA**

6,248,946 B1 * 6/2001 Dwek 84/609
6,377,530 B1 4/2002 Burrows
2003/0016940 A1 * 1/2003 Robbins 386/46

(75) Inventors: **Ron Goodman**, Santa Cruz, CA (US);
Howard N. Egan, Capitola, CA (US)

(73) Assignee: **Creative Technology LTD**, Singapore
(SG)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 323 days.

(21) Appl. No.: **09/755,723**

(22) Filed: **Jan. 5, 2001**

(65) **Prior Publication Data**

US 2002/0147728 A1 Oct. 10, 2002

(51) **Int. Cl.**⁷ **G06F 17/30**

(52) **U.S. Cl.** **707/4; 707/3; 707/102;**
386/46

(58) **Field of Search** 84/609, 601, 602,
84/611-614; 707/104.1, 3, 4, 102; 386/46

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,616,876 A * 4/1997 Cluts 84/609
5,670,730 A * 9/1997 Grewe et al. 84/609
5,918,303 A * 6/1999 Yamaura et al. 84/609
5,969,283 A * 10/1999 Looney et al. 84/609
6,062,868 A * 5/2000 Toriumi 434/307 A

OTHER PUBLICATIONS

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Milestone Player," MP3 newswire.net, Jan. 11, 2000, 5
pages, <http://pjbox.com/newswire/>.

Web page on "MusicMatch Jukebox 4.0: Screen Shot 1," PC
Magazine, Jun. 17, 1999, 2 pages, [http://web.archive.org/
web/20000226113655/www.zdnet.com/products/stories/re-
views/0,4161,2277814,00.html](http://web.archive.org/web/20000226113655/www.zdnet.com/products/stories/reviews/0,4161,2277814,00.html).

Web page, Norton, Patrick, "MusicMatch Jukebox 4.1, the
Ultimate MP3 Utility," techtv, Sep. 17, 1999, 2 pages,
[http://www.techtv.com/freshgear/print/0,23102,2324631,
00.html](http://www.techtv.com/freshgear/print/0,23102,2324631,00.html).

Web page on "Can you carry your CD collection in your
pocket? Yes, you can." Compaq web site, 3 pages, [http://
research.compaq.com/SRC/pjb/](http://research.compaq.com/SRC/pjb/), Printed on Apr. 30, 2004.

* cited by examiner

Primary Examiner—Charles Rones

(74) *Attorney, Agent, or Firm*—Russell N. Swerdon;
Creative Technology LTD

(57) **ABSTRACT**

A method, performed by software executing on the proces-
sor 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.

16 Claims, 12 Drawing Sheets

"433" Patent

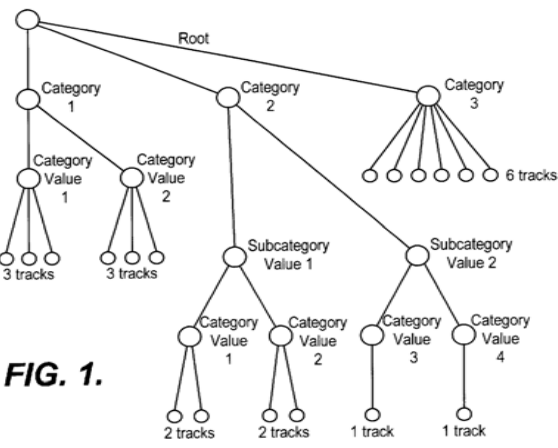


FIG. 1.

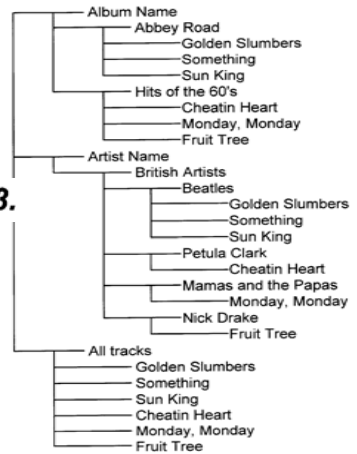


FIG. 3.

Hierarchical structure

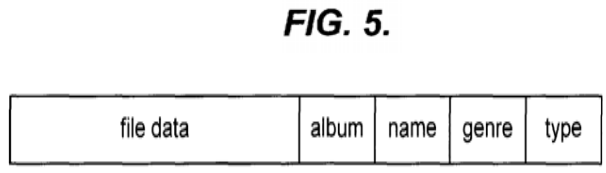


FIG. 5.

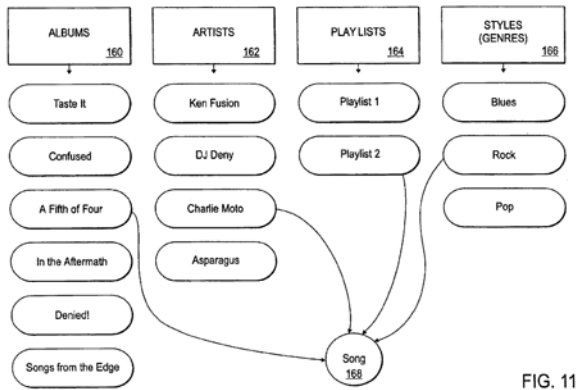


FIG. 11

Metadata & Overlapping Association

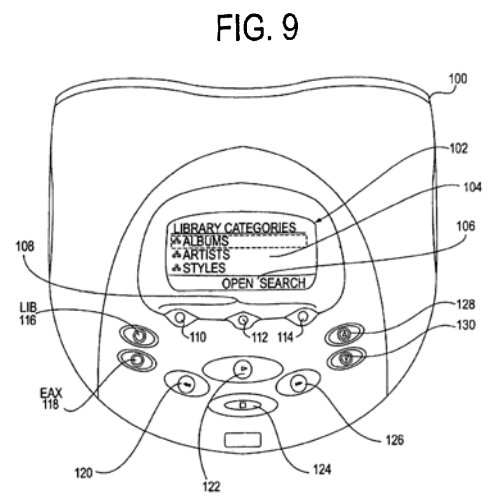


FIG. 9

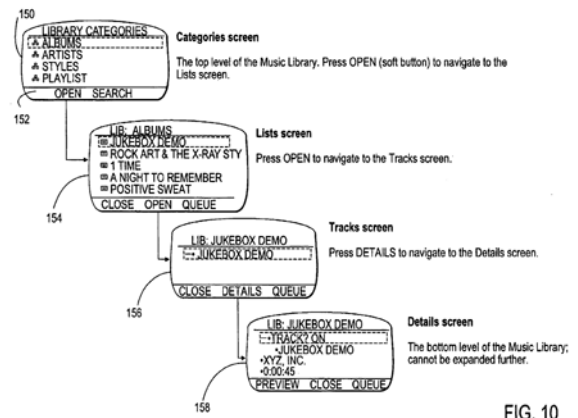
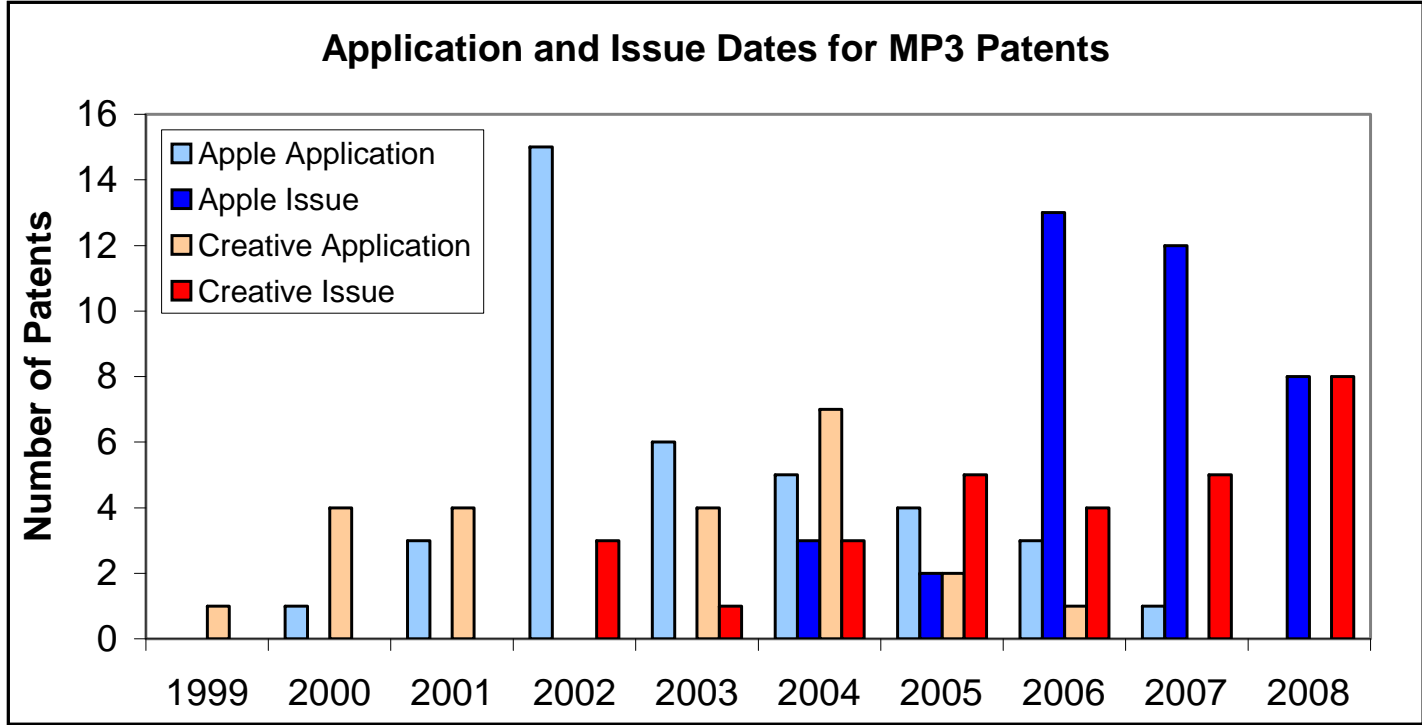
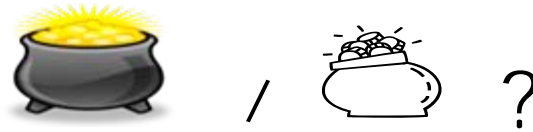


FIG. 10

User interface



- Though Apple has larger R&D budget, they did not have significantly more patents – Apple (38) vs. Creative (29)



Settlement

- **Settlement Amount** : \$ 100 million

Valuation

- **Lost Profit Method** : \$ 100 million of lost Profit
- **Reasonable Royalty** : ~ ~ 1% the total
Revenue generated till date
- **Market-based conditions & Future Potential:**
: 0.13% of total revenue earned till next 5 years



Alternative Protective Measures

1. SW Copyright v Clean Room

2. Provisional Application of US Patent

Copyright Infringement of SW

- Access
- Substantially Similar
 - expression protection vs. idea & its embodiment
 - Originality/Creativity
- Abstraction, Filtration, Comparison

Clean Room Design

- Reverse engineering and recreating it without infringing the copyrights and trade secrets associated with the original design.
 - Clean room design is useful as a defense against copyright
 - But not a defense against patents.
 - **examine the system to be re-implemented and having this person write a specification**
 - **This specification is reviewed by a lawyer to ensure that no copyrighted material is included.**
 - **The specification is then implemented by a team with no connection to the original examiners.**