

# EXHIBIT 6

[x](#) ManufacturingNet

---

[x](#) Automata
  
 [x](#) Design
  
 [x](#) Manufacturing
  
 [x](#) Plant
  
 [x](#) Supply Chain

**More Research Highlights**

## Research Highlights

## Reports

## MP3 Flash Memory Demand Soars Past Expectations

Driven by unexpectedly strong demand, the worldwide market for MP3 players -- which record music from the Internet -- will reach 1.3 million units in 1999, according to a new report by Cahners In-Stat Group. The report also forecasts that the market for MP3 flash memory cards, the recording media for MP3 players, will reach 5.2 million units by the end of 1999. Robust demand for flash memory cards is creating shortages.

"MP3 music mania is a global phenomenon that has pushed the consumer electronics industry beyond its current manufacturing limits," says Jesse Huffman, senior analyst with Cahners In-Stat Group. Several firms have missed overseas shipments due to a shortage of essential components. "There seems to be an industry shortage of flash cards, decoder chips and microcontrollers," Huffman says.

The United States is currently the largest MP3 manufacturing region, with 600,000 units expected to be shipped in 1999. Though the Diamond Rio, an MP3 player by Diamond MultiMedia, has generated much of the industry excitement in the United States, sales of other brands overseas are even more vigorous. There are now over 40 MP3 players on the market with more on the way.

South Korean manufacturers are aiming to export two million MP3 units this year, but In-Stat forecasts that they won't meet that target due to component shortages and financial problems. The country is becoming an MP3 export powerhouse, however, and will more likely export 300,000 units in 1999.

Japanese manufacturing has been slower to take off and will not be ready for exporting until next year. Japanese Internet audiophiles have not been slow to embrace MP3, however. They will snap up 60 percent of Korean MP3 exports in fall 1999 and North Americans will consume the bulk of the rest, according to In-Stat forecasts.

Taiwan is lagging South Korea in manufacturing but will grow rapidly in 2000. Europe has one MP3 manufacturer, Pontis GmbH, which will manufacture 100,000 units in 1999. The low cost of MP3 players will eventually spur manufacturing in low cost labor countries such as China and Mexico.

It's a sure bet that MP3 sales will be strong in 2000, with manufacturing striving to keep up with demand. Some industry executives predict that worldwide shipments of MP3 players will surpass digital camera shipments by 2001.

## The Full Report

## What's in the Full Report

- [Summary](#)
- [Table of Contents](#)
- [List of Tables](#)

## Buy the Full Report

- [Purchase and Download Online](#)
- [Purchase by Telephone](#)

## More Research Highlights

- [Web Sites Targeting Small Businesses Gaining Prominence](#)
- [User Confusion Hampers Wireless Manufacturing](#)
- [Large Firms will Boost Internet Spending](#)
- [MP3 Flash Memory Demand Soars Past Expectations](#)
- [Mobility, Collaborative Apps Drive Mid-Sized Firms' Hardware Spending](#)
- [Small Business Boasts Big Tech Market](#)
- [Internet Sparks Small Business Networking Sales](#)
- [Internet Drives SOHO Technology Spending](#)
- [Top ERP Vendors Think Smaller](#)
- [Scaling China's "Great Silicon Wall"](#)
- [DTV Manufacturers' Agenda](#)

[Research Highlights](#)  
[Home Page](#)

**Cahners.**  
**IN-STAT GROUP**  
**High Technology Market**  
**Research Covering:**

## Report Information

PC audiophiles have embraced MP3 technology at a much quicker rate than was originally estimated -- on a global basis. While manufacturing in North America is currently the largest base, South Korea is coming on strong. This report contains a current listing of MP3 products available, estimated 1999 unit shipment and flash content by memory card format.

- **Report Title:** Flash Memory: Facing the Music
- **Summary**
- **Table of Contents**
- **List of Tables**
- **Report number:** MMMF9907TA
- **Date:** October 1999
- **Pages:**12
- **Price:** \$995 USD

## How to buy this report



**Purchase and download  
report online (PDF)**

- **Purchase by telephone**

- Consumer/ Convergence
- Networking
- Wireless
- Telecom
- Computing & Internet
- Markets & Opportunities
- Semiconductors

- Sign up for free weekly InfoAlert newsletter
- Visit our Web site

[about us](#) | [recommend our site](#) | [help](#) | [contact us](#) | [ad info](#) | [SuperCatalog](#)

©2000 ManufacturingNet

# **EXHIBIT 7**

**Worldwide PMP/MP3 Player Shipments Plateau as Market Succumbs to Competition From Emerging Connected Device Segments**

SKU: IN0904511ID

Analyst: Stephanie Ethier

stephanie.ethier@reedbusiness.com

+1.781.879.3282

August 2009

**Report Summary**

Not so long ago, the PMP/MP3 player market was one of the fastest-growing segments in the portable consumer electronic (CE) industry, with Apple as the runaway leader with its successful iPod lineup. Today, the market is facing a serious slowdown as Apple shifts its focus to its illustrious iPhone, and as iPhone-like competitors pop up.

PMP/MP3 player shipments will reach 225 million worldwide by the end of 2009, up only 5% from 2008. Manufacturers are scrambling to encourage sales by adding enhanced features, like touchscreens and support for Wi-Fi.

Nevertheless, the PMP/MP3 player market has reached saturation due to waning consumer demand, a poor economic environment, and competition from emerging Internet-connected CE segments, such as audio/video-capable smartphones and mobile Internet devices (MIDs).

In-Stat's latest research on the global PMP/MP3 player market includes forecasts for unit shipments and revenues out to 2013. Regional splits for unit shipments, as well as expectations for growth in Wi-Fi-enabled PMPs, are included. New to this research is a bill-of-materials analysis and the total silicon revenue opportunity for suppliers to the global PMP market.

**HIGHLIGHTS**

- PMP/MP3 player shipments will grow only 5% between 2008 and 2009, signifying the start of market maturity.
- By 2013, 28% of global PMP/MP3 player shipments will be Wi-Fi-enabled.
- The total silicon opportunity for PMP suppliers will grow to approximately \$4.2 billion in 2013.

For more information or to purchase, see the [report online](#) or call 1.480.483.4441.

## Table of Contents

---

Executive Summary.....	1
Introduction .....	4
PMP Manufacturers .....	5
Apple .....	5
Archos .....	5
Creative Technology .....	6
iRiver .....	7
ZVUE Corporation (Formerly HandHeld Entertainment).....	7
Microsoft.....	8
SanDisk .....	8
Samsung .....	10
Toshiba.....	10
PMP Suppliers .....	11
Actions Semiconductor .....	11
NVIDIA .....	11
Texas Instruments.....	12
Toshiba Semiconductor .....	12
Freescale Semiconductor (SigmaTel).....	13
Forecasts .....	14
Worldwide Unit Shipments .....	14
Regional Breakout.....	15
Wireless Capability in PMPs .....	16
Worldwide Revenue .....	17
Bill of Materials .....	18
Silicon and Non-Silicon Total Available Market (TAM) .....	18
Methodology .....	21
List of Tables .....	22
List of Figures .....	22
Related In-Stat Reports .....	23

## List of Tables

Table 1.	Worldwide Unit Shipments for MP3 Players and PMPs, 2005 to 2013 (Units in Millions).....	14
Table 2.	Worldwide Unit Shipments for MP3 Players and PMPs, Audio-Only vs. Video-Capable, 2005 to 2013 (Units in Millions).....	15
Table 3.	Worldwide Unit Shipments for Flash-Based PMPs vs. HDD-Based PMPs, 2005 to 2013 (Units in Millions).....	15
Table 4.	Regional Distribution of Worldwide Unit Shipments for MP3 Players and PMPs, 2005 to 2013 (Units in Millions).....	16
Table 5.	Worldwide Shipments for Wi-Fi-Enabled PMPs, 2005 to 2013 (Units in Millions).....	16
Table 6.	Worldwide Revenue for PMPs, 2005 to 2013 (US\$ in Millions).....	17
Table 7.	Bill of Materials for an 8GB Flash-Based, Video-Capable PMP, 2009 to 2013.....	18
Table 8.	Worldwide Total Silicon Available Market for All PMP/MP3 Players, by Component, 2009 to 2013 (US\$ in Millions).....	19
Table 9.	Worldwide Total Non-Silicon Available Market for All PMP/MP3 Players, by Component, 2009 to 2013 (US\$ in Millions).....	19
Table 10.	Summary of Worldwide Total Silicon and Non-Silicon Available Market for all PMP/MP3 Players, by Component, 2009 to 2013 (US\$ in Millions).....	20

[Return to Table of Contents](#)

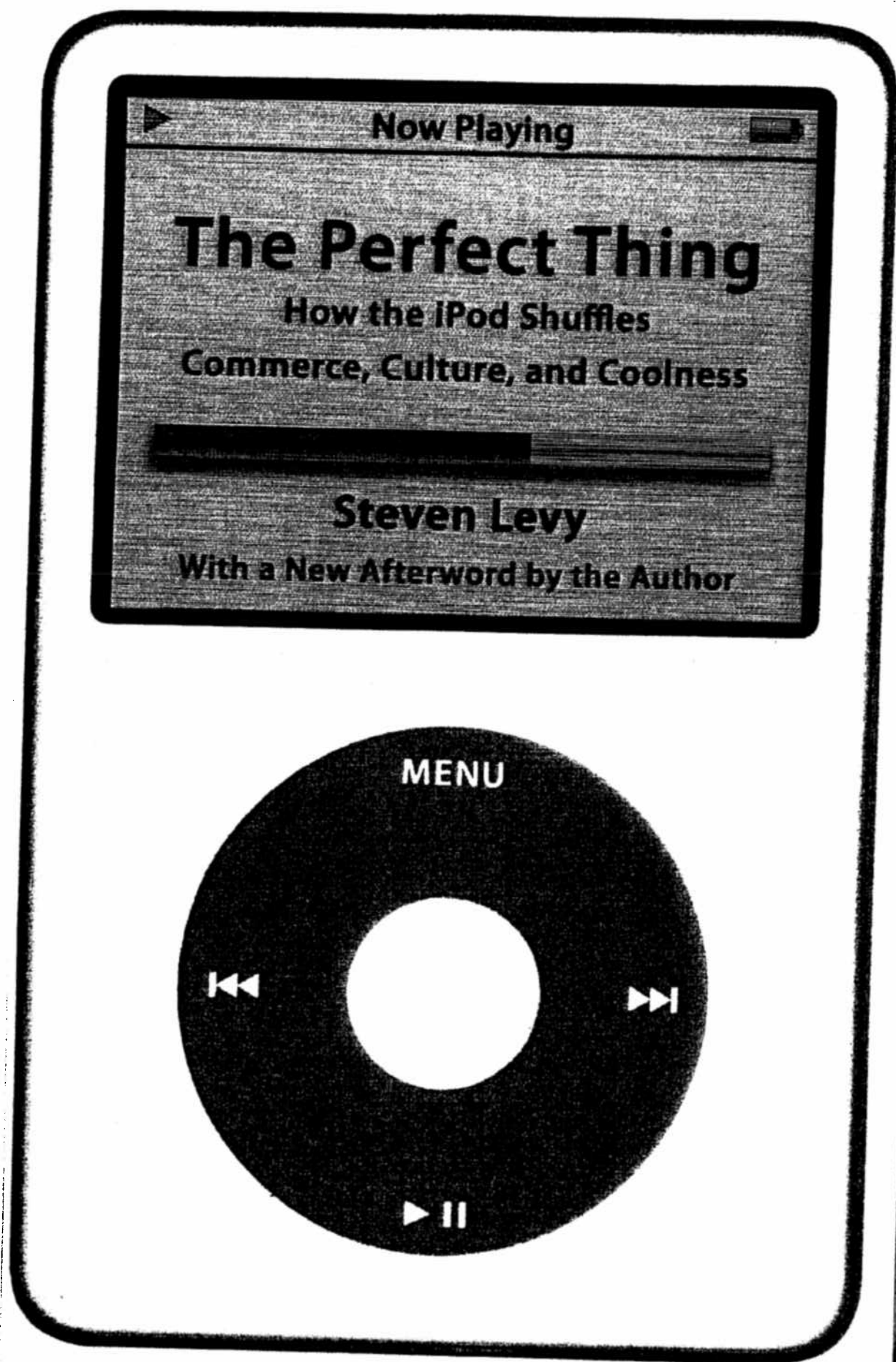
## List of Figures

Figure 1.	Worldwide PMP/MP3 Player Shipments, 2006 to 2013 (Units in Millions).....	2
Figure 2.	iPod Touch.....	5
Figure 3.	Archos 2.....	6
Figure 4.	Creative Zen X-Fi.....	7
Figure 5.	Block Diagram of Nvidia's Tegra.....	12
Figure 6.	Block Diagram of Freescale's i.MX37.....	13

[Return to Table of Contents](#)

# **EXHIBIT 8**





ALSO BY STEVEN LEVY

*Crypto: How the Code Rebels Beat the Government—  
Saving Privacy in the Digital Age*

*Insanely Great: The Life and Times of Macintosh,  
the Computer That Changed Everything*

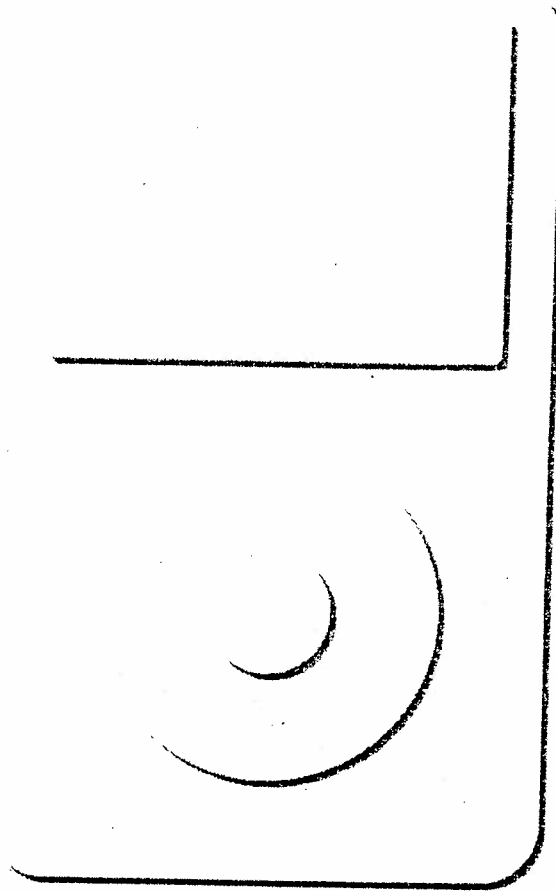
*Artificial Life: The Quest for a New Creation*

*The Unicorn's Secret: Murder in the Age of Aquarius*

*Hackers: Heroes of the Computer Revolution*

# **The Perfect Thing**

How the iPod Shuffles  
Commerce, Culture,  
and Coolness



**Steven Levy**

Simon & Schuster Paperbacks  
New York London Toronto Sydney

To Andrew and Allie



SIMON & SCHUSTER PAPERBACKS

1230 Avenue of the Americas

New York, NY 10020

Copyright © 2006 by Steven Levy

Afterword copyright © 2007 by Steven Levy

All rights reserved, including the right of reproduce this book or portions thereof in any form whatsoever. For information address Simon & Schuster Subsidiary Rights Department, 1230 Avenue of the Americas, New York, NY 10020

First Simon & Schuster trade paperback edition September 2007

SIMON & SCHUSTER PAPERBACKS and colophon are registered trademarks of Simon & Schuster, Inc.

For information about special discounts for bulk purchases, please contact Simon & Schuster Special Sales at 1-800-456-6798 or [business@simonandschuster.com](mailto:business@simonandschuster.com)

Designed by Elliott Beard

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

The Library of Congress catalogued the hardcover edition as follows:

Levy, Steven.

The perfect thing: how the iPod shuffles commerce, culture, and coolness / Steven Levy

p. cm.

Includes bibliographical references and index.

1. iPod (Digital music player) 2. Apple Computer, Inc. I. Title

ML74.4.I48L48 2006

006.5—dc22

2006050270

ISBN-13: 978-0-7432-8522-3

ISBN-10: 0-7432-8522-0

ISBN-13: 978-0-7432-8523-0 (pbk)

ISBN-10: 0-7432-8523-9 (pbk)

## Cool

➤ Dr. Carl Rohde is a cultural anthropologist at the University of Utrecht in the Netherlands. He studies coolness. He lectures, writes scholarly articles and books with titles like *Symbol Soup: The MTV Generation and its Symbols*, and consults on coolness for dozens of companies, including Adidas, Coca-Cola, Wrangler, and General Motors. Twice a year he heads the European Cool Hunt, which is, according to his curriculum vitae, “120 cool hunters all over Europe continuously searching for cool people, cool places, cool mentalities, cool trends. And for the reasons why it is cool.”

“Cool” is a term that seems as strongly linked to the iPod as white earbuds, the Apple logo, and gripes about battery life. So certainly the Professor of Cool would be missing a major trick if he did not identify the 'pod as a central player in global coolness in the twenty-first century. And Dr. Carl Rohde does not disappoint. “It’s a totally cool product,” he says. “We have documented this, beginning at the time when iPod started its march to the number one position, which it actually has now.”

So it’s official: the iPod is the coolest thing in the world, a fact that in itself isn’t so illuminating. (Just look at that little puppy—what’s the first word out of your mouth?) The bigger question is



how much the iPod's coolness is responsible for its commercial success, as well as its place in the culture and in our fluttering hearts. What's more, since the iPod's status is now so beyond dispute, by understanding *why*, we can learn not only about the iPod but about coolness itself, and what it says about ourselves.

The task is trickier than it sounds, in part because of the broadness and ubiquity of the C-word. It's flung about so often that one may be excused for dismissing the whole exercise as hopeless, on the grounds that "cool" is an all-purpose descriptor for anything that tips the scale on the positive side. On the other hand, as Dr. Rohde's consulting contracts indicate, the quality is something that commerce must pursue. Coolness is not merely an attribute of a commodity; it *is* a commodity. Yet part of its essence is that it's inherently elusive. Maybe it's possible to buy coolness, but if it *looks* as if you've bought it, it isn't cool. Coolness is also a constantly moving target. Sometimes an object, trend, or pop song begins life in the zone of total uncoolness, but with the passage of time a subtle redefining of aesthetics or desirable behavior occurs and it winds up (at least for a time) in the zone of total coolness. To people grounded in rationality—like the propeller-heads who live and breathe technology—the whole subject can be incredibly frustrating.

I once found myself in a heated discussion with Bill Gates about the nature of cool. I had said something pretty obvious from my point of view: that the Tablet PC, Microsoft's pen-based laptop, despite being the beneficiary of the hard thinking and technological virtuosity of many brilliant people, was simply not cool. And the iPod was. This observation incensed Gates. By that measure, he claimed, cool can be defined simply by reporting the marketplace's reaction to a product. "It sounds to me like you're saying volume

equals cool," he charged. That's not it at all, I replied; coolness is not necessarily tied to profits. He challenged me to come up with an example of something cool that didn't sell well. Okay, I said, what about rock bands universally revered by trend makers (like the Velvet Underground in their heyday) but with sales that didn't track to their heady reputation? He didn't buy it. "Only cool to a small amount of people," he sniffed. "In a sense, to be cool, you've got to have high market share. High market share is something that comes after hard work and making the hard decisions. [When it first came out], Microsoft Word was as uncool as it could possibly be. I mean, *Microsoft Word*? Not cool! But then, it [eventually] re-defined the word processing category."

But, Bill, I said, remembering the time I showed him his first iPod, didn't you think the iPod was cool even before it became a commercial success? "It's an irrelevant question," he sniffed. "I knew that music player devices would sell well. And I knew as soon as they got this high [sales] volume, *you* would declare it cool. As night follows day."

Our disagreement isn't surprising considering how easy it is to declare something cool and how hard it is to produce something cool. Not to mention how hard it is to *be* cool. There's an element of magic involved that drives pragmatists like Bill Gates nuts. Nonetheless, shareholders often demand that companies deliver that magic on command.

Can cool be reliably produced?

Few have sought the secret as determinedly as the longtime entrepreneur and technologist Yossi Vardi, the godfather of the Israeli dot-com movement. Vardi's greatest success came when he provided the funding and guidance for ICQ, the first instant messaging program. When he first became involved, ICQ was just a

program created by some very smart kids. But when ICQ was released on the Internet, with no marketing, it became a viral phenomenon, a part of life for tens of millions of people. Eventually Vardi sold the company to AOL for \$400 million. But the amazing way it took off on its own, becoming the passion of millions of people, stuck with Vardi. He became obsessed with the question *What made it cool?* "Every day, for weeks, for months, eighty thousand more people would download this software," he told me one day as we breakfasted at a tech conference. "We began to get love letters, hundreds of love letters. 'ICQ, I love you!' I came to the realization that there must be some genetic code in this thing, something embedded there which created this strong resonance in the heart of the users. I said to myself, 'Okay, now the thing I have to do is very simple. I have to decipher the code. If I know the code, I can replicate it, and if I can replicate it, I can create a production belt.' "

A production belt?

"How do you call that thing that Ford did?"

"Yossi," I said, "that's an assembly line."

"Yes! An assembly line to crank out cool."

For the next three years, Vardi dove deep into the calculus of cool. "I bought maybe two hundred, three hundred books," he says. "I have a whole library on experiences in theater, in storytelling, in software, in architecture, in retailing, in shopping, in traveling. I talked to architects, talked to artists, talked to software makers, talked to people who created wonderful things."

But all that knowledge brought him no closer to the secret he sought. There were many, many lessons to be learned from the astonishing things people have created and the fascinating responses from people who considered those things cool. Nonetheless, Vardi never came close to cracking the code because the more he learned,



the more he understood that there was no code to crack. He found himself identifying with the Japanese engineers in a story he heard.

"I don't know if it's true or not," he says, "but I heard that when the Japanese wanted to create the Lexus, they took three hundred engineers and they told them, 'Go and see why the Mercedes is cool.' And they defined all these very implicit, tacit things in the Mercedes, like, for instance, the click of the door. You know, when you close the door of the Mercedes, you have a very distinct noise. And they found that in order to achieve this noise, the entire rim of the door has to touch the chassis of the car at once, along the whole rim. If you have the formation of the door at one point touch before the rest of the rim, you don't have this click."

In other words, you couldn't re-create that Mercedes feeling by isolating the noise and then jimmying up a door to replicate that noise. What was cool about the sound was the way it revealed how the click had gotten there to begin with. "The click came as a consequence of the way the door was, the care they took to make that," says Vardi, "and that was a consequence that stood for the perfection of the door."

Vardi ultimately concluded that you cannot produce coolness on demand. The only thing a company can do is strive for perfection and hope that the gods smile on it.

And yet . . . there is Apple Computer. The C-word has been consistently linked to Apple's products. Most emphatically, the iPod has taken on that adjective almost as a birthright. What is the link between coolness and iPods? Is trendiness a significant component of the iPod's success? Why has the world of fashion embraced the iPod? Why won't your kids accept a generic substitute, which plays the same damn songs an iPod does?

Apple itself does not generally cite coolness as a reason to pur-

chase its products. Once I directly asked Jobs whether he had tried to make the iPod cool. "No," he said, "we try to make it great. *We try to make it great.*" At a 2004 press conference, someone asked him what would happen if iPods were no longer considered trendy. He looked at the questioner as if she'd tried to feed him a cockroach. "I don't think we're seeing something trendy," he said. "It's a product that's truly revolutionizing the way people listen to music. You don't spend \$250 or \$300 for something because you want to be trendy."

Oh, really? It certainly is no secret that people often spend *thousands* of dollars because they want to be trendy (though they will rarely explain their purchase in just those words). There is an entire economy devoted to the pursuit of trendiness. Jobs is certainly not unaware of this, and though he professes to disdain such cultural climbers, he is surely aware that Apple is a beneficiary of such trends. On the other hand, he seems to imply that his company deserves its exalted cultural status, while its competitors do not. In a November 2003 article in *The New York Times Magazine*, he dismissed companies that tried to pursue innovation for its own sake—as opposed to Apple's approach of hitting the target by making great products—as "somebody who's not cool trying to be cool."

Coolness *does* matter to Apple. A case can be made that Steve Jobs has devoted as much energy to Apple's image as he has to its computers. He introduces television ads at his launch events as if they were new products themselves, instead of Madison Avenue concoctions produced to sell objects. When a new ad campaign breaks between launches, he instructs his minions to generate coverage of it in major publications. It's not uncommon for me to get a call from an Apple PR person asking if I would be willing to view a commercial under a nondisclosure agreement and then get an ex-

clusive Steve Jobs interview about it, timing *Newsweek's* coverage so that we hit the streets just as the ads hit the air.

Jobs builds his brand the way Michelangelo painted chapels. One of the first things he did when he returned to the company in 1997 was to develop an advertising campaign to rebrand Apple in people's minds as a company apart from its competitors. His vision for Apple since the day he cofounded it was that it would be regarded not as a faceless corporation but rather as a company that *meant* something. "My goal," he told me in 1983, "is to become a ten-billion-dollar company with soul." In 1997, the way to tell people that the soul was back, he concluded, was to link Apple with cultural icons who exemplified the characteristics that he wanted people to think of when they thought of Apple. People who thought differently.

Jobs worked on the campaign with Lee Clow, the creative director of TBWA\Chiat\Day. This was a homecoming, as Clow had worked with Jobs and Apple on its famous "1984" advertisement that kicked off the Macintosh in that year. (The commercial, in case you missed the most celebrated 60 seconds in advertising history, depicted an entire dystopian state laid to waste when a young blond woman courageously tossed a sledgehammer into a screen where an Orwellian dictator was blathering instructions. It never showed the product or even mentioned what sort of thing the product was, and it was nationally aired only once, during the 1984 Super Bowl. But people are still talking about it.) Clow and Jobs shared a vision of what Apple had once represented and a desire to regain that idealistic aura. "They asked us to come in and talk about what Apple needed to do to get its focus back," Clow told *The New York Times* in 1998. "It really wasn't hard; it was just to go back to Apple's roots." Originally, Chiat\Day's idea was to show different-thinking people who actually use Apple computers, but when the ad people tested

the slogan along with images of true giants whose hands had never touched a mouse—Einstein, Gandhi, and Martin Luther King—they realized that they could make a statement with a much bigger impact.

“The whole purpose of the ‘Think Different’ campaign,” Jobs once told me, “was that people had forgotten about what Apple stood for, including the employees. We thought long and hard about how you tell somebody what you stand for, what your values are, and it occurred to us that if you don’t know somebody very well, you can ask them, ‘Who are your heroes?’ You can learn a lot about people by hearing who their heroes are. So we said, ‘Okay, we’ll tell them who *our* heroes are.’ ”

Of course, what we got was a sense of who Steve Jobs’s heroes were. He assumed that by associating his company with the people *he* admired, he’d lead consumers not only to think more highly of Apple but be inspired by what Apple stood for! Helping pick out which of these heroes would be the subject of advertisements was, he says, “one of the best parts of my job.”

Adding to the mystique of the Think Different initiative was the fact that the ads never identified the heroes by name. Though some visages had Rushmore-esque status—Picasso, Alfred Hitchcock, Muhammad Ali—others, like Maria Callas and Frank Lloyd Wright, were not exactly household faces. “Young people like it because they feel they’re not being talked down to,” said Clow. “And the knowledgeable people feel it’s cool to be among the cognoscenti.”

Jobs devoted himself to the ad campaign with his typical fanatical attention to detail. Of course, his idol Bob Dylan had to be among the Think Different crowd. And since “one of my greatest heroes is Gandhi,” he says, he worked overtime to secure the rights to the photo he considered the perfect image. “You have to get two



sets of permissions, one from the estate and one from the person owning the picture," he explains. "We got permission from Gandhi's grandson, but Time-Life, who owned the picture, said, 'No way.' I had to call [Norman] Pearlstine [at the time, the head of Time Warner's editorial division], and he said okay."

Another Jobs touchstone, John Lennon, was easier. "Yoko said okay for a picture of her and John. I was actually here in California, and I saw her in a restaurant. She came over and said, 'I knew I was going to see you sometime soon, so I've been carrying this picture for a week.' "

By the time the iPod appeared in 2001, Apple had recaptured its mojo, and its simple fruit logo had regained status as a cool indicator in itself. To introduce the iPod—at the time an unfamiliar device that needed some explanation—Jobs felt a fairly traditional campaign was called for. Apple's commercials showed a guy undocking the device and dancing, thus illustrating the iPod's portability and ability to suck songs off your computer.

It wasn't until 2003 that Apple unveiled a much cooler campaign that would be forever identified with the iPod: "Silhouettes." Also created by TBWA\Chiat\Day, these ads exploded in your eye with blinding neon backgrounds. Though the human being was rendered as a moving black silhouette, the iPod itself and its white earbuds were a pure white that visually screamed even more loudly than the bright yellow or green or purple background. At first, the silhouettes were static images on magazine pages, billboards, and bus shelters.

Transferring the campaign to video for television commercials was a fairly intricate process, set into motion for a debut in early 2004, to promote the Windows version of iTunes. In each spot a hot young person—his or her face not seen but often featuring a touchstone of hip minority status, like dreadlocks—would be going

absolutely bananas to a wild rock or hip-hop song, typically a brand-new tune by a band that your kid has heard of but you haven't. The Chiat\Day people, using a cutting-edge video house called Company 3, made three versions, each one focusing on a different sizzling genre of music: rock, techno, and hip-hop. All featured a tune from a new band in the genre, and the exposure of the rock group Jet and the dance-oriented Black Eyed Peas helped catapult the groups into stardom. The white earphone cords—painstakingly drawn frame by frame by postproduction artists—would shake wildly, a serpentine invitation to the aural bacchanalia provided to those who partook of the iPod drug. It was an out-of-control party in your head, which justified the neoepileptic fits of the anonymous baggy-pants dudes or miniskirted babes. Finally, the dancer would vanish and on the screen, in Apple's familiar bold Garamond font, would appear all the words you needed to know: "iPod, Mac or PC." And then the Apple logo.

"Without saying a word," wrote Randall Stross in *The New York Times*, "the commercials present viewers with a choice: orgiastic boogaloo-ing with the in crowd, or standing forlornly out of the picture."

But though Apple spent an estimated \$200 million for promotion during the iPod's first four years—more than twenty times as much as its rivals Sony, iRiver, and Creative combined—the commercials were only one component of the coolness initiative that augmented the product's massively positive word of mouth. Apple has always had an aggressive Hollywood operation designed to sneak Macintosh computers into TV shows and movies (think of Carrie Bradshaw's black G3 laptop, *Seinfeld's* iMac, and all those Macs tracking down terrorists in *24*). More often than not, the producers don't need convincing—they come to Apple first. The effort

to make the iPod a movie star was destined for success whether Apple asked for it or not.

Take Fox Network's most popular Gen Y television show, *The O.C.*, a prime-time soap. It is insanely influential in the music industry; the tunes that play on its sound track are the contemporary equivalent of the old *American Bandstand* for breaking new acts. The creator of the show, Josh Schwartz, is a lunatic Apple fan. He considers the iPod "the greatest invention since the wheel." (Not the scroll wheel—the *wheel*.) On the dark day when a lowlife thief broke into his black 530 BMW and ripped off his forty-gig iPod, "there was a hole in my heart," Schwartz says, and he immediately drove to an Apple store to replace it. Naturally, he had had no reservations about giving the iPod a recurring role in his television show, so much so that at one point the executives at Fox sent him a letter telling him to stop the free publicity to Apple and consider using generic MP3 players instead—a directive he considered clueless. "I want to show the *iPod*," Schwartz says. "It's what our audience uses and what our characters would use."

The iPod is also a prize possession in such shows as *Scrubs* and *One Tree Hill*. The psychic detective in *Medium* tracked a killer by a bloody iPod. The lifestyle alchemists in *Queer Eye for the Straight Guy* use iPods to enhance the coolness factor of the hopeless dweebs they make over. And the 5G iPod got the American equivalent of a royal imprimatur when it was listed as one of Oprah Winfrey's "Favorite Things of 2005." (The Queen of Daytime had previously named an earlier model one of her favorite Spring Things, and in May 2003, she presented one to each of 350 audience members.)

Getting iPods into hip-hop videos took a little more micromanaging. Executives at Interscope Records called Jobs to suggest that

he send off some iPods to load the prop room for 50 Cent's video of his new song, "P.I.M.P." "One of the things we do is deliver a message of cool," Ron Gillyard, Interscope's head of urban music, told my *Newsweek* colleague Jennifer Ordonez. "We said if kids see 50 Cent with an iPod, it will make the iPod cool to them." That's a rather simplistic equation, but in any case the video turned out to be a full-fledged, um, pimping of the iPod to the world of hip-hop and its suburban wannabes. It shows the notorious rapper prepping for an important meeting of "The Council of Pimps" by scrolling through the menus on his iPod, a device that holds his intense attention despite the potential distraction of half-naked "hos" stalking his bedroom like lionesses at the watering hole. Later in the video, 50 Cent addresses the distinguished Council of Pimps, chaired by the wizened rapper Snoop Dogg. He, too, has an iPod! Niiice.

In the movies the iPod has played more character roles than Steve Buscemi. It has been a prop or plot point in *The Italian Job*, *Blade: Trinity*, *Agent Cody Banks*, *First Daughter*, *Legally Blonde 2*, and the Spielberg remake of *War of the Worlds*.

But it would be a huge mistake to attribute the basic attraction of the iPod to the ad campaigns and endorsements. The Lesson of Yossi applies here: it wasn't the commercials that made the iPod cool; the iPod *declared itself* cool from the get-go. As a reporter for the BBC, writing about the silhouette ads, put it, "Unlike 99% of campaigns the creatives' job here is simply not to blow the product's cool." The idea was to enhance the basic coolness components that were already there. Simply filling the screen with an iPod might do the trick—at least in the thinking of the ad geniuses at the Ford Motor Company, which made a commercial for its new Fusion model that begins with an extended close-up of Apple's music player. "The iPod is so iconic that people stop to watch the ad,"



gushed a Ford spokesperson to *Slate*'s Seth Stevenson, who branded the practice "cool by association." But coolness isn't a transferable commodity. As Yossi would tell you, iPod's coolness comes not from clever marketing or tribe mentality but from *what it is*.

Sure, some people are undoubtedly drawn to the iPod by the buzz around it. In August 2005, a marketing firm called the Diffusion Group set out to find out how many people by asking the question "To what extent does the 'cool factor' pull people toward the iPod and away from other devices?" The authors of the study began by stating the obvious: "It took no time for the iPod to become the chosen device of the ultra-cool set—it was a status symbol, a level of techno-chic that very few could aspire to and even fewer could make happen." But was that still valid four years after its launch, they wondered, when iPods were cheaper and more common and even Dick Cheney had one? The firm conducted a survey that drew responses from seven hundred mobile phone users in Internet households.

The study, released in October 2005, unearthed a lot of interesting factoids. For instance, iPod users groove on rock and roll 20 percent more than the average music consumer—and they listen to hip-hop 50 percent more. Owners of non-Apple digital music players are more likely to plug in to jazz, blues, and classical music.

But was their relationship with the iPod a true commitment or a faddish infatuation? The answer is that they truly, madly, deeply loved the iPod. Yes, there was indeed a percentage—12 percent, in fact—who had gravitated to the iPod mainly to jump on the bandwagon, and those, the Diffusion Group found, were the most likely to switch brands in the future. They're sort of the bridge-and-tunnel crowd of consumers, hooked on someone else's idea of cool. The rest of the vast collection of iPod owners, the millions and millions of others, had bonded more firmly. Their very first experience

with shuffle mode seemed to have acted like an imprinting experience. They were in for good.

Nonetheless, part of the enjoyment of owning an iPod certainly seems to be the cachet of owning it. It's a modern twist on the old canard that no one is fired for buying shares in IBM—no one is branded uncool for owning an iPod. And in certain circles it is severely uncool to own anything else. Even the children of Microsoft executives have made it clear to their parents that they will accept no substitute, even if it means betraying the company that issues the family paycheck. Owning one makes you part of something bigger than yourself; when people talk about the iPod generation, you're right there. Especially in the early days of the iPod, when white earbuds were not as ubiquitous as ears, there was a feeling that when you spotted someone else with an iPod, silent high fives were exchanged. "It gives you the feeling you belong to a tribe," says Carl Rohde, the Professor of Cool.

That feeling changed as iPods became standard issue, and the tribe was as likely to include your grandmother as it was Kate Moss. At that point in the life cycle of a hip product—whether a playground-idol athletic shoe or a sneery punk band—there arises a coolness crisis. It's one thing to establish coolness among a knowing minority. But the crossover to a larger audience risks everything. As the Professor of Cool puts it, "You have to all the time reassure the most important target of your coolness, the minority, 'Hello, I'm still cool.'"

Apple managed that shift without losing a beat. In Rohde's view, "The iPod has done this. It has jumped from minority coolness to mass coolness."

The transition is further proof that the iPod's essence—not its marketing or its aura—is behind its popularity. While coolness might have been in the back of Apple's head all along, the company's

real drive was for greatness. As Virginia Postrel, author of a perceptive book on the role of industrial design, *The Substance of Style*, explained to me, "Things can be cool because they're exclusive and single you out as an early adopter or somebody with money or somebody with unusual fashion-forward taste. But things can also be cool just because they're really beautiful and people like them. And then they can still be cool if they become ubiquitous."

It is no mistake that Postrel cited the iPod's beauty. She argued in her book that such high style is not a frill but something with inherent value. "Aesthetic pleasure itself has quality and substance," she wrote. "The look and feel of things tap deep human instincts. . . . Having spent a century or more focused primarily on other goals—solving manufacturing problems, lowering costs, making goods and services widely available, saving energy—we are increasingly engaged in making our world special. More people in more aspects of life are drawing pleasure and meaning from the way their persons, places, and things look and feel. Whenever we have the chance, we're adding sensory, emotional appeal to ordinary function."

The iPod turns out to be the canonical illustration of this theory. While there are obviously many factors that make the iPod irresistible—not least of which is its association with music, and not just any music but our own favorite songs, which it plays in heavy rotation—one stands out as launching the iPod to the very heights of the statusphere. This is its universally celebrated, endlessly pleasing, devilishly functional, drop-dead gorgeous design. The aforementioned Diffusion Group study concluded that even when the device became so commonplace that it was embraced equally by the trendsetters and the clueless, its design would keep the iPod on top. "Any short-term impact of a diminished 'cool factor' is unlikely to impact Apple in the long run—assuming it

continues its design mastery,” concluded the authors of the Diffusion Group study. In fact, a full 13 percent of the iPod owners interviewed reported that its aesthetic design was the *primary* reason they had bought it.

The Professor of Cool isn’t surprised. “It just looks beautiful,” says Rohde.

“There’s a tactile quality to it, and yet it’s very, very modern and sleek,” Postrel told me. “So it kind of has that nice warm-cool, hard-soft, masculine-feminine, modern-comfortable mix.”

Michael Bull, a British sociologist who studies personal audio, has noted that in the digital age, the music itself is obtained as an opaque file with no packaging—the traditional aesthetic components like album art and liner notes have disappeared. “The aesthetic has left the object—the record sleeve—and now the aesthetic is in the artifact: the iPod, not the music.”

Not only do the iPod’s owners admire the look of their iPods, but frequently (this is alarming) they display signs of a deeper, more physical attraction. You can see this in their interaction with the six-ounce hunk, especially in the early days of the affair. Owners love to touch it; during interviews I notice that discussing an iPod will trigger an urge to take it out of purse or pocket and fondle it, as if it were a small pet that needs reassuring. Maybe they’re also assuring themselves that it’s not lost. In any case, people can’t keep their hands off it. Don Norman, the former Apple guru of user-friendliness and author of *Emotional Design*, has noticed this about iPods. “People fondle these new toys,” he says. “They hold it in their hand, turning it around, stroking it. Not only does it look good, it feels good.” More to the point is the confession twelve-year-old Josie Lonetti blurted out to a reporter for the *St. Paul Pioneer Press*: “On the first day I got my iPod, I kissed it good night, and my little sister called me an insane freak.” We can chalk that up to youth, but

what was the excuse of the grown woman writing for *Wired News* who exchanged her original iPod—which no longer worked—for a more powerful new one? She cried so hard that she could hardly breathe and spent two days in mourning, during which she could not bring herself to open the box of the replacement for the beloved (but broken) fifteen-gig “Pigwidgeon.” Tales like this abound in the blogosphere and in conversations overheard in college cafeterias.

This fierce emotion is shared by Apple’s CEO, by the way. Steve Jobs is very sensitive to any slight, even a veiled one, to the iPod’s appearance. Once as I began an interview with him, I took out my microphone-equipped iPod to record the conversation. The device was covered by a translucent plastic iSkin cover. He looked at me as if I’d smeared the *Mona Lisa* with cow excrement. I tried to explain that I wanted to prevent the smears and dings that iPods often attract. He wasn’t having any. “I think the stainless steel looks beautiful when it wears,” he said. “Probably it’s like us. I mean, I’m going to be fifty next year, so I’m like a scratched-up iPod myself.” (Ironically, this conversation occurred only days before Jobs was diagnosed with pancreatic cancer.)

So it is that the wellspring of the iPod’s coolness is its unmistakable look. How did *that* happen? It turns out that the iPod’s industrial design has a clear pedigree. While Steve Jobs has consistently presented the development of the iPod as a team effort, he has publicly singled out the company’s industrial design ninja as the guy responsible for the look and visual integration of the device. This is Jonathan Ive. Known within the company as Jony, Ive has continually made design history and put enough Apple hardware into the Museum of Modern Art’s design collection to make MOMA an informal annex of the Apple Store. The iPod represents the apex of the partnership between Ive and Jobs. In some quarters people be-



lieve him to be the father of the iPod. (U2's Bono calling him "Jony iPod" helped that one along.) That's inaccurate, but it is fair to say that his vision fixed its look.

Jony Ive is a burly guy in his late thirties but appears younger. He's hulky under a loose T-shirt, hair shaved a few nanos short of a dome. Once he speaks, it's clear that he is more aesthete than hooligan. His tone is hushed and respectful, particularly when one of his creations—be it iMac, iBook, Power Mac G4 Cube, or iPod—sits in front of him. The accent is middle-class British. Ive was born in Essex in 1967 and has been in the United States for a decade and a half. Ive's work at Apple (along with Jobs's decision to give him credit) made the designer a celebrity in his own right. In June 2003, the Design Museum in London proclaimed him the winner of its first Designer of the Year award; Ive won both a public vote and a juried competition. The BBC called him "the Armani of Apple." In 2004, fashion, film, media, and design experts polled by the BBC named him the most influential cultural figure in all of Britain. (He beat out J. K. Rowling and Elton John.) And the 2006 Queen's New Year's Honours List bestowed on Ive the title of Commander of the British Empire. But the best accolade comes from his boss: "Working with Jony is one of my favorite things here."

As a child, Ive loved objects and especially enjoyed dismantling them. By his early teens, he understood that his future would be designing new things, and though he was never very good at drawing, he concentrated on art and design at school, matriculating at Newcastle Polytechnic. He then cofounded a trendy London design firm called Tangerine, where he drew up plans for hair combs, power tools, and even a toilet.

Though he was anything but a computer expert, late in his college days Ive discovered the Macintosh and was blown away. "I remember being astounded at just how much better it was than

anything else I had tried to use," he once told an interviewer for the Design Museum. "I was struck by the care taken with the whole user experience. I had a sense of connection via the object with the designers. I started to learn more about the company, how it had been founded, its values and its structure. The more I learnt about this cheeky almost rebellious company the more it appealed to me, as it unapologetically pointed to an alternative in a complacent and creatively bankrupt industry. Apple stood for something and had a reason for being that wasn't just about making money." So in the early 1990s, when Apple did a search for a hot young designer to energize what had become a dreary operation, the twenty-five-year-old Ive eagerly took the interview, shaking with fear that he would somehow blow his chance. He got the job offer in 1992 and moved to Cupertino. His hopes were high, not only because he was going to work for what he had assumed was a cheeky company willing to break rules, but because for the first time he'd be inside the belly of a corporate beast, able to pull levers that a consultant doesn't ordinarily get his hands on. Those hopes were pretty much bleached out in the California sunshine. "The company was in decline," he said. "It seemed to have lost what had once been a very clear sense of identity and purpose. Apple had started trying to compete to an agenda set by an industry that had never shared its goals."

Almost five years into this unexpectedly dead-end sinecure, Ive got the break of his career: Steve Jobs became his new boss. Jobs, of course, is an autodidact of industrial design, known globally as a trendsetter in the field. When Jobs was still in his twenties, he once explained his vision of design to me, using as a symbol the object whose name he appropriated to name his computer company. "Fruit—an apple," he said. "That simplicity is the ultimate sophistication. What we meant by that was when you start looking at a

problem and it seems really simple with all these simple solutions, you don't really understand the complexity of the problem. And your solutions are way too oversimplified, and they don't work. Then you get into the problem, and you see it's really complicated. And you come up with all these convoluted solutions. That's sort of the middle, and that's where most people stop, and the solutions tend to work for a while. But the really great person will keep on going and find, sort of, the key, underlying principle of the problem. And come up with a beautiful elegant solution that works."

This was a remarkable expression for a businessman, reflecting the classic quest for enlightenment, something one would definitely expect to find in the Zen 101 final exam. Satori, then ship. Jobs believed that semispiritual process was the secret of the Macintosh, the project he described at the time as "the greatest I ever worked on." Jobs later achieved a level of success with the NeXT computer workstation, which, despite being a commercial failure, is now regarded as having been a springboard for a number of significant innovations. And he certainly enjoyed triumphant vindication with the Pixar Animation Studios, which he would build into the world leader before selling it to Disney for more than \$7 billion in 2006. But in 1997 no one would have dared place a bet on him to come close to replicating the Macintosh's winning mix of technology and design. Nonetheless, when he returned to Apple, it was exactly that pinnacle of high-tech, groundbreaking, design-driven innovation that he hoped to match and even surpass.

Naturally, Jobs was eager to locate a partner to realize his aesthetic vision for the new Apple. Generally, he regarded the company in 1997 as largely gutted of creativity. On the other hand, as he explained to me not long after he took over, one saving grace was the surprising number of "A and A-plus people" among the company's ranks. These were people who had refused opportuni-



ties to take their considerable talent elsewhere because they refused to believe that the dream of Apple was dead. Although Jobs had no qualms in flipping pink slips at the lesser lights, he was more than happy to retain one top employee. No one was more of an A-plus-er than Ive, though the Londoner was frustrated and jaded by then. "I don't know if this is true," Jobs says, "but Jonathan told me that the day he met me, he had his resignation in his pocket."

Ive *has* said that on the day that Jobs returned, work was begun on the iMac, the computer that would begin Apple's comeback on the innovation trail. Jobs went to Ive's house and outlined his design goals while walking around a vegetable garden planted by Ive's wife. The two were clearly kindred spirits, sharing an aesthetic that mixed outlandish novelty with an anodyne Zen sensibility. And Ive couldn't believe how much Jobs understood about physical style; he was even knowledgeable about obscure Italian designs. Though Jobs could often be blunt, Ive claimed to appreciate the straightforward nature of the feedback. "He'll give you three sentences, and as you work they will become more clear," he says. And the iMac set the tone for a collaboration so successful that Jobs made Ive the exception among all creative people at Apple, exposing him to the general public.

But even as the iMac was celebrated for its fresh, delightful look, Ive and Jobs insisted that the source of its coolness was not skin deep, but the result of painstaking attention to detail. "The thing that all of our competitors are missing is that they think it's about fashion, they think it's about surface appearance," Jobs complained to me once. "And they couldn't be further from the truth. The iMac isn't about candy-colored computers. The iMac is about making a computer that is really quiet, that doesn't need a fan, that wakes up in fifteen seconds, that has the best sound system in a consumer computer, a superfine display. It's about a complete com-

puter that expresses it on the outside as well. And [competitors] just see the outside. They say, 'We'll slap some color on this piece of junk computer, and we'll have one, too.' And they miss the point." At a later interview, talking about the first iBook, which had a rubbery satchellike clamshell case, he argued that the very inclusion of a built-in handle had been an exercise in style. "Is that design?" he said of the handle. "I think it is. It's not just about looking good, it's about the use of the product. Not having a latch, is that design? Yeah, we think it's design. The rubber on the product, is that design? Yes. It affects how the product looks and how you feel about the product, but it's also incredibly functional if you happen to set it down too hard."

Perhaps the most aesthetically accomplished computer that Ive designed was the G4 Cube, a breathtakingly compact white enclosure floating in a Lucite frame. The Cube was an important product for Apple—not in the business sense but for its psyche. During an extended session with Jobs and Ive several days before its release, I realized that the Cube was the apotheosis of all they wanted an Apple product to say in design. It was about being brutally minimal. "This is the coolest computer ever made," Jobs told me. "It's our vision of what technology should be and how it should work and what it can do for you. We make progress by eliminating things. It's a much more courageous approach, much harder than living with all this [cheaper] stuff that most people live with. Saying *this is not necessary, we can take this out*. And you're left with just the essential thing." Ive, who had been nodding silently while his boss spoke, chimed in, "We're total fanatics about this stuff!" (Unfortunately for Apple, the sales of the premium-priced Cube were more minimal than Jobs had hoped, and the critically acclaimed machine went down as a glorious overreach.)

But Ive's greatest work will always be the iPod. One day Ive dis-

cussed how he had shaped its look. The conversation took place in 2004, just before the release of the fourth-generation iPod. (This was the first full-sized iPod with the “click wheel,” distinguished by the buttons embedded in the scrolling circle itself.) Spread before us on a conference table was the new model, flanked by all the previous variations and generations, neatly arranged as props for our meeting. Why, I began, do people feel so emotional toward the iPod, and what might its design have to do with it? “I think it’s a complicated answer,” he said. “There are so many things that have made it successful. When I talk about ‘stuff,’ I deliberately focus on—obviously—the design, but I very much acknowledge and am very much aware that it’s a successful product because of the whole phenomenal system.”

That disclaimer out of the way, he gingerly began to explain how he had crafted the iPod’s look. The conversation was like being escorted on a secret tour into the caverns of coolness. “We are surrounded by so many electronic and digital devices that are on a similar sort of scale,” he said. “Just think of the hundreds and hundreds of thousands of these. And they’re not really very good. They’re so instantly forgettable. One of the problems with each of these individual projects is that there’s a story behind them of a designer wagging his tail in your face. They’re just clamoring for attention. Now, you know how obsessed and seriously we take our design here. But to us, the *music* was much more important than the design. Somehow, I think our goal was about getting design almost out of the way. We wanted to create a very, very new object. But think of how many hundreds of thousands of objects of this sort there have been in the last twenty years! This was a fairly ambitious challenge—not to create another trivial digital small object. The goal wasn’t to *try* to make it immediately and instantly recognizable at twenty feet. But it *is*. It is, because of the consequence of

the more important goal—just to try to design a product that was efficient, elegant, and simple.”

Ive looked down at the table at the row of iPods, from the original scroll wheel model to the mini to the yet-unreleased fourth generation. “What it really was about, in some sense,” he finally said, “was getting design out of the way.”

Ive believes that a key to that Zen-like goal was the color of the original iPod. The subject of the iPod’s glossy white polymer finish is something so deep that it reduces the normally articulate Ive to fits and stutters. “If you think about white,” he begins, “white is such a . . . a . . .” He grasps for a word that will capture this chimerical concept, while his eyes devour, as if for the first time, the Moby-esque whiteness of the iPod, a palm-sized slice of Antarctica laid before us. “I mean,” he finally continues, “on one hand, it’s neutral. But it is such a *bold* neutral. If you just think from an Apple point of view, we started out as the color company”—here he is talking about the first iMac, which added color to what had been the drab beige prison of computing—“and then we came out with these sort of *unapologetic, perfect white products*.” First came the shimmering, almost ethereal Cube. Then the company replaced the outside of the laptop iBook—which debuted in lollipop hues of blueberry and tangerine—with a dense white plastic exterior. It was like the Beatles following up the baroque business of their *Sgt. Pepper* album cover with the naked blankness of *The White Album*.

The iPod was the boldest step yet toward whiteness, an effort directed to the heart of visual simplicity and minimalism, with perhaps a yearning toward invisibility. “Right from the very first time, we were thinking about the product, we’d seen this as stainless steel and white,” Ive explained. “It is just so . . . so brutally simple. It’s not just a color. Supposedly neutral—but just an *unmistakable, shocking neutral*.”





It's almost as if Jony Ive, a London-born industrial artist, were channeling Ishmael, the narrator of Herman Melville's fabled novel. "In many natural objects, whiteness refiningly enhances beauty, as if imparting some special virtue of its own," Melville wrote in *Moby-Dick*. Ishmael is driven to solve "the incantation of this whiteness," a journey that leads him to ask whether white "by its indefinitiveness . . . shadows forth the heartless voids of immensities of the universe, and thus stabs us from behind with the thought of annihilation, when beholding the white depths of the milky way." At least that's what I *think* Ive is getting at. Certainly the passion of Ive's soliloquy seems at odds with the psychological interpretation of iPod white offered by Luke Williams, an expert affiliated with the celebrated Frog Design collaborative. "Consciously or unconsciously," he wrote, "the iPod materials reference a convention of cleanliness that *everybody* interacts with *every day*—a bathroom." In Ive's view, the null hue is much more in line with Melville's blizzard-level turmoil than with an idyll on the potty.

Ive draws a sketch for me to illustrate the Whiteness of the Pod, how they laid the polycarbon plastic on the rear steel cladding to get "quite a strong, almost sort of halo around the product," rendered so that the chromelike steel is visible from some angles but only subliminally perceived in other angles. The surface itself is a "double-shot polycarbonate," a two-layered concoction wherein an injection molding procedure binds a transparent plastic coating over a layer of solid white.

As this conversation continues, Ive grows more intense. Now he turns to the packaging. It would take a complete additional chapter in this book to fully capture his description of how the fold-open box was designed, how each component fits perfectly in its slot, how opening the box is akin to unwrapping the most care-

fully packed Japanese artifact. For a full two minutes he talks about the number of decisions and breakthroughs required to settle on the just-perfect way the FireWire cable would be wound and bound and situated in the box.

Clearly he is pouring his heart out. He goes on to describe the exacting considerations behind each curve and tolerance on the unit. There are profound implications behind every degree of beveling and every micromasurement in the seam between the silvery steel and the snow-colored skin. It's hard to imagine holding such a conversation with the designers working for most other companies. We are no longer in a world where a device like a digital music player has a few screws on the back so service people can open it. A recessed screw on this device would stick out like a lug bolt on a Brancusi. Even an "On" button was considered too much of an aesthetic abomination to be included on this exalted artifact.

"*So much* of what we do is worry about the smallest of details," he says. "We think it's the right thing to do, to care that much, but at the back of your mind you wonder, *will anyone ever notice?* And while I don't think all the people using the product notice or care in a conscious way about every little detail, I do think in the aggregate it's really important, and it contributes to why people like the product."

Now that we've absorbed the shock of the new white of the iPod, he's ready to talk about what might be an even greater triumph in design, the iPod mini. This is the tinier iPod introduced at the Macworld Conference & Expo in January 2004, just as the iPod itself was really taking off in the marketplace.

The mini's defining attribute, of course, was its size, 35 percent smaller than its big brother and almost 50 percent smaller than the original iPod. Steve Jobs has always had an insatiable fetish about

miniaturization. The *Saturday Night Live* skit where a Jobs imitator (decked out, natch, in black turtleneck and jeans) introduced in rapid succession a fingernail-sized iPod micro, a confetti-sized iPod pequeño, and a final, literally imperceptible iPod invisita (holding *eight million songs and every photo ever taken*) was a joke rooted in truth. So it was no surprise that just as the original iPod was finding its mass audience, Jobs would exploit the advances of smaller hard drives and lower-tolerance scroll wheels (which in 2002 had gone from a mechanical version to a slimmer solid state version) to shrink the iPod. To maximize space—and do away with buttons entirely—Jobs's team came up with a new twist on the mini's scroll wheel, the original version of the click wheel that was now graduating to the original model. You navigated by clicking on the compass points of the wheel: North for "Menu," East for "Forward," South for "Pause," and West for "Back." "The click wheel was designed out of necessity for the mini, because there wasn't enough room for [the buttons on] the full-size iPod," says Jobs, "but the minute that we all experienced it, we just thought, 'Oh, my God! Why didn't we think of this sooner?'"

This new variation would also feature *colors*—gold, silver, pink, green, and blue—in a striking brushed-aluminum case. And held side by side with the original, it made the white model—acclaimed as the sleek sports car of music players—suddenly look like an SUV.

"The mini was designed with exactly the same philosophy [as the original iPod]," says Ive. "We were trying to take advantage of and exploit the fact that it was a smaller drive and really understand the differences. We made one model taking an approach [similar to the original], using that design vocabulary and form factor, and it was just completely wrong. Then we started to explore very different materials and approaches. We realized we could



make this in aluminum. Unlike with stainless steel, you could blast it and then anodize it—which is a form of dyeing—and then you could do color in an unusual way.”

Another factor that Apple was aware of from the beginning, says Ive, is that from the get-go the smaller version of the iPod should be built with some way of physically attaching it to the user, as if it were clothing. “Most things have stuff that clips onto them, and it’s a pretty unpleasant process,” says Ive. So the mini was built so you could wear it, either on a plastic belt connector, which was included in the package, or on an armband, which Apple sold for \$30. (“There is a new form of jewelry in the land,” says Don Norman. “In the past only one technology, a wristwatch, was so commonplace that we strapped it to the body and thought of it as jewelry. Now we have the cell phone, the digital camera—which are merged—and Apple’s music player.”) Apple’s designers tried to figure out how people would attach the device to themselves and what the vulnerabilities would be if they dropped it at that point of exposure, and then tried to engineer it so that if you did drop it at that point, the device wouldn’t be rendered dysfunctional. “A lot of what we do will be thankless because it’s not obvious, because we refuse to rub your face in it,” says Ive.

At first glance, a lot of technology writers, myself included, wondered whether the mini would be a hit. The iPod’s little sister was more compact and very attractive, to be sure. But it really wasn’t much less expensive. It cost \$249, while the big brother dropped to \$299. Do the math. A standard iPod with twenty gigabytes of memory—5,000 songs’ worth—stored its music at six cents per song. The mini held only 1,000 songs—a quarter per song! Why wouldn’t you spend a lousy fifty dollars more and get to carry a music library that was five times as big? Jobs sounded a bit defensive when asked this question after introducing the mini. He first

emphasized how great the colors were, predicting that gold would be huge—"I think the hip-hop crowd's going with this one"—and confessing his own preference: "I'm a silver kind of person." He insisted that the lower price would make a difference to some people: "It's easy for us to underestimate, but for many people \$50 is a lot of money." He suggested that some people who already owned an iPod might want a second one for the gym. "They're going to want both," he said. "They're going to say, 'On a trip, I'll take my whole library with my iPod and when I go to the gym I take my mini.' " Not surprisingly, considering Jobs's well-known fetish for miniaturization, he extolled its compactness and praised the work of his engineers in making it so small.

Aside from Jobs's guess that gold would be the most popular color (it was the least), it turned out that he was right and the geek critiques were all wrong. We made the mistake of crunching the numbers. Those who followed fashion instead of tech specs—like Virginia Postrel, who from the outset predicted success for the mini on her blog—understood that this smaller, more colorful, more affordable, and even cuter iPod would not only do well but extend the audience of the iPod and drive it even more deeply into the cultural gestalt. "What [Apple] realized is that this is a fashion accessory that people enjoy looking at and wearing, and that it's not just about how many songs it holds," says Postrel, who bought herself a blue mini.

The mini, in fact, became the best-selling iPod of all. Especially among women. When the *Today* show hosted a "Gender Wars" debate between two consumer technology touts in April 2004, both the male and female commentators chose iPods—but while the guy wanted the burly forty-meg white model ("You gotta have the big iPod"), the female commentator specified a pink mini ("It's teeny!"). When her male counterpart tweaked her with a patroniz-

ing comment that she might have been a sucker for the cool color, she acknowledged that while she liked the look, the key was that “it just works.”

But cool hunters have concluded that the look may indeed have been the clincher for millions of iPod mini buyers. “Never underestimate the wow-factor of design,” wrote Carl Rohde in his 2003–2004 *Global Cool Hunt Report*, “even when in quantitative research, respondents hardly ever mention the importance of design as part of their buying decision-making process.”

What was the most popular iPod color? Silver. But every time I went into the Apple store in SoHo, especially around Christmas, the shortest stacks of iPod minis—meaning the ones most in demand—seemed to be the pink model.

The mini represented a turning point for iPod. Clearly, the reduced storage capability didn’t seem to bother people. In fact, in 2005, a Solutions Research Group study showed that the average iPod owner has 504 songs; a different survey found that the average was 900. Apple Executive Vice President Phil Schiller says that Apple has concluded that a limit of 1,000 songs turns out to be the “sweet spot” for most people, the number that sticks in most people’s minds as the most they’ll need. (A 2004 Jupiter Research study backs him up further: it found that only 23 percent of consumers said that they’d ever need more than 1,000 songs on their player at one time.) There will always be music nerds who gripe that even 10,000 songs is not enough for their copious collections. But for some people, the ability to hold thousands of songs is a liability—the vast empty space is intimidating, a silent rebuke to one’s music-gathering ability.

But then there’s Karl Lagerfeld, the renowned fashion designer who instantly took to the iPod and, in no time, went over the top. His iPod lust is symbolic of the way the fashion world has em-

braced the iPod. "I have 60 i-pods [sic]," he scrawls longhand on Chanel stationery. "It's the new way to store music. I can travel with all my music." He explains how Louis Vuitton made him "a beautiful traveling case," which houses his iPod collection and a portable loudspeaker system. Lagerfeld has an elaborate system involving laser-etched codes on the back of various iPods that clarify which sorts of songs each unit stores. Prada, Kate Spade, Gucci, and other designers all got into the business of making skins and cases for iPods, but Lagerfeld topped them all with his own carrying case made for Fendi, dubbed the Juke Box. Selling for \$1,500, the gaudy multicolored giant purse—a virtual RuPaul of iPod transport—holds up to a dozen devices.

By the time the mini family got an upgrade in early 2005—adding not only longer battery life and more storage but hotter colors—Apple was more fully exploiting its aesthetic appeal. A press release led off with a message that emphasized couture over chips:

Your music has never looked so good. And neither have you. . . . With a new palette of colors to choose from, iPod mini caters exclusively to your individuality and sense of style. Pick the color that suits you best—silver, pink, blue or green. Each iPod mini is brighter than ever and completely wearable, ensuring that it will spice up any outfit. Just attach it to the included belt clip or to an optional accessory like the lanyard or armband and you're ready to go out in style.

Indeed, the mini was a fashion object to die for.

Apple tried a further experiment in color with its U2 iPod, a special model with the signatures of the Irish rock band engraved on the rear casing. It was the first black iPod—an ebony tinge as



dense as the leather jacket worn by Bono, the group's loquacious lead singer, set off by a fire-engine-red click wheel. "The black iPod is something I coveted—this is a beautiful object," said Bono in October 2004 at a press roundtable session after he and guitarist The Edge performed two songs at the launch event in San Jose. "People want to sleep with it," he added. "My three-year-old loves it. It's sexy, and music should be sexy." After the roundtable, Jobs introduced me to the singer, and as soon as the CEO moved out of earshot, Bono serenaded Apple's design prowess some more. "Working with Jobs was as easy as pie," he said. "We'd call, and he'd be obsessing on the Bakelite. Apple has created an art object for hardware and software to live in."

Art? Indeed, some people have gone as far as to say that the industrial design of the iPod and other Apple products is tiptoeing toward that lofty realm. But Jonathan Ive is reluctant to go there. "The goal of art is self-expression, and the goal of this is for people to be able to listen to music on a device that was cared about, where every detail was worked on and refined and refined and refined," he says.

"I don't see it as art," he concludes. "I mean, I see it as a digital music player."

Cool.