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## RIP. MIX. BURN.

### The iPod, iTunes and Netflix

At the turn of the century, Apple was not anywhere close to the technology behemoth it is today. In fact, Apple was dangerously close to bankruptcy before its original cofounder Steve Jobs came back to Apple and saved the company. Because Apple was such a niche player in its main market, personal computers, it didn't have much of a role in the first part of the Internet Era. In the late 1990s, Apple's share of the computer market in the United States fell below 3%.<sup>1</sup> The dot-com world was a Windows world, and so Apple simply wasn't a company Internet players paid much attention to.

It's legendary now how Jobs returned to Apple, ruthlessly streamlined its product lines by killing extraneous projects, brought in a young executive named Tim Cook to turn Apple's supply-chain and manufacturing processes into the envy of the technology world, and embraced a then-obscure industrial designer named Jonathan "Jony" Ive to churn out innovative and beautifully crafted computers that stood out from the dull beige boxes produced by the likes of Dell and Compaq. The product that would change Apple's fortunes was the iMac, the Ive-designed translucent and colorful computer that debuted in 1998 and would become Apple's biggest hit in a decade. The "i" in iMac was meant to suggest an innovative, but also individualized, device—a return to the "personal" in personal computing. But the "i" was also meant to suggest "Internet."<sup>2</sup> In a time of near-total Windows domination, Jobs and Apple struck on the idea of

rebranding their Macs as machines uniquely designed for the Internet Era.

Jobs wanted Macs to become the “digital hub” in a forthcoming media utopia that would include then-novel gadgets like DVD players, digital cameras, digital camcorders, personal digital assistants and more. The Mac would be the central machine that would help manage and empower all the other gadgetry. To this end, Apple began releasing a whole suite of Apple-produced (and Macintosh-exclusive) software applications to make the digital hub a reality, including iDVD, iPhoto, iWeb and GarageBand.

But, thanks to Napster, digital music was all the rage. The next logical step in the digital-hub strategy would be to create a killer application for digital music, for MP3 files. One of the more popular Mac applications for MP3s was a Winamp-like digital jukebox called SoundJam, which was developed by two former Apple engineers. In March of 2000, Apple purchased SoundJam and turned it into an application called iTunes, which was unveiled at the Macworld trade conference on January 9, 2001.<sup>3</sup> iTunes became the flagship of Apple’s digital hub. Combined with the new CD burners that Apple began to ship in its computers, users were soon encouraged to “Rip. Mix. Burn.” In other words, digitize your CD collection, create playlists and mix songs like you did on programs like Winamp, and then burn CDs of your choosing.

Steve Jobs intuited that music was the key spoke in the wheel that was the digital hub. But on the outer edge of that wheel were the devices that the hub was supposed to manage, and when Steve Jobs looked around at the digital devices for music, the MP3 players produced by companies like Diamond Multimedia, he felt that they, in his words, “truly sucked.”<sup>4</sup>

The first MP3 player to be widely commercially available to consumers was the MPMan released by a South Korean company named Saehan Information Systems in 1997.<sup>5</sup> The earliest MP3 players were developed by smaller companies like Saehan and Diamond Multimedia because of the questionable legal status of the MP3. After the RIAA lost its case against Diamond, a flood of other devices followed from an array of companies. But it was this fragmented market that was also the main reason the early MP3 players “sucked.” The smaller companies didn’t have much experience with hardware or software design. It was difficult to get music onto the devices, to manage the music files, and they couldn’t store many songs.

Well—Apple was the best in the world at user interface design.

But—Apple wasn’t really in the gadget business. It was in the computer business.

Although—come to think of it, what *were* MP3 players but tiny, single-purpose portable computers?

In late 2000, an Apple executive named Jon Rubinstein made a routine trip to Japan to visit electronics supplier Toshiba. In his meeting with Toshiba's engineers, he was told about a new, incredibly small, 1.8-inch hard drive the company had developed that could hold up to five gigabytes of data. Toshiba wasn't sure what it could be used for. Laptops, obviously. Or maybe digital cameras? Rubinstein knew *exactly* what it could be used for. Toshiba's hard drive was the size of a silver dollar but had the capacity to store about 1,000 MP3s. If Apple married this hard drive to its elegant hardware and software design prowess, it could design an MP3 player that blew the others out of the water. Jobs authorized Rubinstein to buy all the 1.8-inch hard drives he could get his hands on.

The device that would eventually be called the iPod was the result of a crash development program that took place over less than a year. Rubinstein led the iPod development team along with Tony Fadell, a gadget whiz who had previously worked at Philips Electronics. Apple did indeed bring its unique design magic to the project, under Jobs's famously exacting tutelage. In April of 2001, the iPod team presented their prototypes to Jobs in person. Fadell, who had only recently joined the company, had been warned by veteran Apple executives that Jobs tended to reject early ideas, no matter their merit. So, Fadell presented other concepts first, saving his favorite prototype for the end of his presentation: a rectangular device about the size of a pack of cigarettes—small enough to fit in pants pockets. Another Apple executive, Phil Schiller, demoed the iPod's key user-interface breakthrough. With so many songs to choose from, selecting something to listen to could get tedious. "You can't press a button hundreds of times," Schiller said.<sup>6</sup> Instead, the iPod would feature a wheel that allowed you to scroll quickly through your list of files.

"That's it!" Jobs shouted.<sup>7</sup>

In later meetings, Jony Ive would contribute to the device's iconic aesthetic. "Right from the very first time we were thinking about the product, we'd seen this as stainless steel and white," Ive said later. "It is just so . . . so brutally simple. It's not just a color. Supposedly neutral—but just an unmistakable, shocking neutral."<sup>8</sup> Even the headphones would be white. Well, not exactly white, because Steve Jobs hated pure white. So, the headphones were technically a shade named moon gray, which was so light as to appear white.<sup>9</sup>

Jobs would later remember the development of the iPod as a series of

serendipities. “We suddenly were looking at one another and saying, ‘This is going to be so cool,’ ” Jobs told his biographer, Walter Isaacson. “We knew how cool it was, because we knew how badly we each wanted one personally.”<sup>10</sup> The device was at once a departure for Apple—a leap into the consumer electronics space—and the purest expression of the digital hub philosophy. Combined with the iTunes software app, users would have full control over their digital music collections.

Steve Jobs unveiled the iPod on October 23, 2001. With his showman’s panache, he emphasized the device’s enormous capacity—“You can take your whole music library with you”—combined with its extreme portability—“I happen to have one right here in my pocket.”<sup>11</sup> The price was on the high side: \$399, and it was only available to users of Apple’s Mac computers. Nonetheless, Apple sold 150,000 iPods in the first quarter they went on sale.<sup>12</sup> Users could now organize their music using Apple’s carefully designed iTunes software, and enjoy their music on Apple’s beautiful iPod. But there was still one part of the equation that was missing: how were you supposed to acquire the MP3 files to fill your iPod and your iTunes library? Well, you would rip them from your existing CD collection or download them from the file-sharing sites, because the record companies still weren’t embracing the MP3 format.

Napster and the flood of technologies that followed in its wake hadn’t impacted the music industry right away. In the first half of 2000, while the RIAA was in the midst of shutting Napster down, music sales were actually up 8%.<sup>13</sup> But the next year, the impact of file sharing appeared. In 2001, the number of CDs burned worldwide matched the number of CDs sold in retail stores. Consumers didn’t need to buy prerecorded CDs when they could rip, mix and burn their own. By 2003, it was estimated that 2 billion music files were being exchanged *every month*. More than 57 million people were sharing music files in the United States alone.<sup>14</sup>

By 2002, music revenue came in at \$12.9 billion, down 13.7% from its \$14.6 billion peak in 1999.<sup>15</sup> The industry was increasingly desperate, looking for any solutions that would stop the bleeding. They had tried to launch their own online music download sites (with stringent digital rights management software to prevent the proliferation of illegal copies, naturally), but these initiatives generated little interest from the public at large and collapsed under the weight of industry infighting and competing strategies.

Into this crisis stepped Steve Jobs. With iTunes and the iPod, Apple had crafted an end-to-end software and hardware experience that was increasingly popular but also carefully managed. All it needed was a commerce element so

popular but also carefully managed. All it needed was a commercial element so that a fully digital musical ecosystem could be realized. It was clear that this was what users wanted, and if the record companies had been afraid to embrace the digital future for fear of piracy and file sharing, well, Apple was willing to tackle that problem as well. Jobs directed Apple's engineers to create a digital rights management system called FairPlay that carefully limited the devices music files could be played on. He did this not because he liked copy protection schemes (he didn't; he felt DRM needlessly complicated the user experience), but because he knew that was the way to get music executives to the negotiating table.

In early 2002, Jobs began approaching executives at the five major record companies with a proposal to create an iTunes store. If the record companies would license him the right to sell their catalogs as digital downloads, Apple would make sure that users would enjoy their music inside Apple's end-to-end ecosystem in a controlled and, crucially, legal way. Still the record companies balked. Jobs was insisting that they learn *the* crucial lesson of Napster: consumers wanted unlimited selection and freedom of choice. People were filling their hard drives—and now their iPods—with their favorite songs, not necessarily their favorite albums. Jobs wanted to sell individual songs on the iTunes store, and this was what the record companies couldn't abide because they were still wedded to the physical album.

Jobs was convinced that ease of use and customer choice were key to competing with the lure of the free. Making it dead simple for people to get what they wanted would make piracy seem like a hassle in comparison. Sure, people could buy albums on the iTunes store if they preferred, but at a more reasonable price that took into account the cost savings of digital distribution. Part of that was offering individual songs at 99 cents apiece. That way, it felt like an impulse to buy music, almost an afterthought. The revenue arrangement Jobs offered—the record companies would take two-thirds of every sale and Apple one-third—was actually a better deal than the record companies got from physical retailers. And yet it was this insistence on breaking up the album bundle that almost kept the iTunes store from happening. "I've never spent so much of my time trying to convince people to do the right thing for themselves," Jobs would say later of his negotiations with the industry.<sup>16</sup>

In the end, Jobs was able to get the record companies—all five of them—to sell their music in the iTunes store for three important reasons. First, Steve Jobs was a rock star in his own right, an icon. As the owner of the Pixar movie studio, he was a bona fide Hollywood mogul, and to an industry of tastemakers, his celebrity had impact. Second, the music industry was desperate. Nearly three

years into the era of file sharing, they had been unable to come up with a legal way to download digital music that people wanted to use. They were looking like idiots; worse, they were looking like obstructionists, unwilling to deliver what their customers were demanding. But third, they were willing to experiment with Apple because, at the time, Apple was an insignificant player. Both iTunes and the iPod were, at this point, available only to Mac users. “We used our small market share to our advantage by arguing that if the store turned out to be destructive it wouldn’t destroy the entire universe,” Jobs said later.<sup>17</sup>

Apple announced the iTunes Store on April 28, 2003, and in no time Jobs’s notion that ease of use and user freedom could give piracy a run for its money proved prescient. The iTunes Store sold a million songs in just six days.<sup>18</sup> A year later, Apple would announce it had sold 100 million songs. Less than a year after that, 1 billion.<sup>19</sup>

But Steve Jobs, of course, had a legendary stubborn streak of his own. Jobs had always conceived of the iPod as a way to sell more Apple computers. He was still married to the idea of the Mac as the digital hub, so he was reluctant to bring iTunes to Windows machines (and thus, the majority of computer users). “It was a really big argument for months,” Jobs recalled, “me against everyone else.”<sup>20</sup> Jobs declared that Apple would do a Windows version of iTunes “over my dead body.” Only after Apple executives showed him business studies that proved Mac sales would be unaffected did Jobs capitulate, saying, “Screw it! I’m sick of listening to you assholes. Go do whatever the hell you want.”<sup>21</sup>

The contracts with the record companies were renegotiated and iTunes for Windows was announced in October 2003. Opening up the iPod and iTunes to Windows was the turning point that set Apple on the path to becoming the biggest, most profitable company in the world. Around the time of iTunes for Windows, Apple sold its 1 millionth iPod. That next holiday season of 2003, it would sell nearly three-quarters of a million more. A year later, in the holiday season of 2004, it sold 4.5 million.<sup>22</sup> By mid-2006, Apple had sold 58 million iPods in total, and the iPod-iTunes business combined contributed 61% of Apple’s total revenue.<sup>23</sup> Apple was no longer “just” a computer company.

But then, the iPod was the first device to prove that computers were no longer just computers. In the Internet Era, you could put a computer into any piece of consumer electronics and suddenly it became something more. Twenty years before the iPod, the Sony Walkman sold 340 million units by proving that music could be both portable and personal.<sup>24</sup> But the iPod brought “personal” computing out into the larger world in a way that had never happened before.

iPods, with their soon-to-be-ubiquitous white(ish) earbuds, became fashion statements, calling cards of the “hip” and the “modern.”

The iPod returned Apple to a prominent place in the technology industry. Other companies, especially Microsoft, with its Zune MP3 player and accompanying music store, attempted to usurp Apple’s dominance in digital music. But (irony of ironies) the iTunes software platform gave Apple a near-monopoly of the MP3 player and digital music download markets. It was (ironically) a software platform that Microsoft couldn’t penetrate. By 2007, Apple’s iTunes controlled 70% of legal digital music sales.<sup>25</sup> The iPod claimed a similar share of the MP3 player market.

Apple taught the world what it meant to be a consumer electronics company in the Internet Era. This was best exemplified by the brief, glorious life of the iPod Mini. The first smaller, cheaper iPod (also, the first with fashionable colors beyond white), the Mini was the model that really caused iPod sales to take off. It was the bestselling model of the iPod in its time—by far. Most other companies would have milked a cash cow product like that for as long as they could. Not Apple. Less than two years after releasing the Mini, Apple replaced it with the iPod Nano, which switched out the tiny hard drives in favor of superior Flash technology for storage, thereby allowing iPods to get thinner and more portable still. Apple showed a willingness to eat its young in order to stay on the cutting edge; to out-innovate itself before others ever had the chance.



NAPSTER HAD SHOWN that computers and the Internet were made for music, just as Shawn Fanning had said all along. Apple was the first company to bet its entire business on the bonanza that the new Internet paradigm made possible. But what Apple *didn’t* do was save the music industry.

All through the height of the iTunes Store’s popularity, the music industry’s revenues continued to collapse, from an inflation-adjusted height of \$21 billion in global sales in 1999 to just under \$7 billion in 2015.<sup>26</sup> Sales of digital music didn’t surpass physical music until around 2011; as recently as 2017, 22% of all music sales were still in physical formats.<sup>27</sup> Business models, even when they’re dying, can stubbornly cling to life, right until the very end (just ask the newspaper industry, which still makes the bulk of its money delivering news on dead trees via trucks).

The record companies had been right all along: selling songs individually wasn’t as lucrative as selling entire albums. Selling two or three good songs at

99 cents apiece could never hold a candle to selling one good song and eleven crap songs for \$17.99. Music journalist and *Rolling Stone* editor Steve Knopper points to the Baha Men as an almost quintessential one-hit-wonder musical act. He notes that in the year 2000, their song “Who Let the Dogs Out?” was a sensation, and fans bought 4 million copies of the Baha Men album of the same name—most likely *just* to get that one song. Just three years later, the hot song was “Stacy’s Mom” by Fountains of Wayne.<sup>28</sup> The album with “Stacy’s Mom” on it only sold 400,000 copies. “Stacy’s Mom” *did* sell 520,000 downloads as a digital single on platforms like the iTunes Store. But what do you think the record company would have been happier with? A hit single moving 4 million albums at around \$17 a piece, or just 400,000 albums and half a million digital singles sold at 99 cents apiece?

Steve Jobs had leveraged the music industry’s crisis over piracy to destroy the business model of the album. He had done so out of selfish interests, but that doesn’t change the fact that his actions actually served the interests of consumers. The lesson of commerce in the Internet Era—from Amazon through Napster through the iTunes store—has been that consumer habits and expectations have changed radically. The general public has intuited that the Internet and digital technology enable a world of unlimited selection and instant gratification. If your business model stands in the way of that, well, consumers will just go around you. It’s a lesson that the music industry failed to learn from Napster, and it’s a lesson that media companies are having to re-confront again and again, even down to the present day.

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GIVING CONSUMERS WHAT THEY WANT was the key to Netflix’s success as well. The official tale of Netflix’s birth is that CEO Reed Hastings got a \$40 late fee for not returning a copy of *Apollo 13* in time. Incensed, he founded a DVD-rental company that wouldn’t treat its own customers so shabbily. Like eBay’s Pez Dispenser, however, this late-fee-as-eureka-moment is merely a PR-friendly origin story dreamed up retroactively. Netflix was actually the brainchild of Marc Randolph, who had been an employee at one of Hastings’s previous companies, Pure Atria. When Pure Atria was sold and both Hastings and Randolph were between engagements, Hastings agreed to fund Randolph’s brainstorm, which was a scheme cribbed directly from Amazon: instead of Earth’s biggest bookstore, Earth’s biggest video rental store.

Launched on April 14, 1998, Netflix originally benefited from a secular media shift: the transition from VHS to DVD. At launch, Netflix could only

boast a library of a little over 500 titles.<sup>29</sup> But these were nearly all the DVDs in existence at the time. In 1999, only 5% of households owned a DVD player. But that percentage more than doubled by 2000, more than doubled again to 37% by 2002, and climbed further to 65% by 2004.<sup>30</sup> Nearly every DVD player shipped with coupons for free Netflix rentals right in the box. Netflix gave you something to do with your shiny new movie machine. The DVD became the fastest adopted consumer electronics technology in history, and the number of DVD titles Netflix could provide exploded.

Netflix also benefited from being essentially the only game in town for a while. The incumbent rental behemoths—Blockbuster, Hollywood Video and Movie Gallery—were reluctant to embrace the new format. They had been burned by the earlier LaserDisc technology, which had only proven popular to a niche audience. When, in the summer of 2000, Netflix even offered to sell itself to Blockbuster for about \$50 million with the express idea that Netflix would become the DVD channel for Blockbuster, thereby saving it from the costly transition of its inventory from VHS, Blockbuster said no.<sup>31</sup> It still didn't believe DVDs would catch on.

Netflix was originally launched as a hybrid service. You could rent DVDs à la carte for \$4 a piece plus \$2 for shipping the disc to you in those little red envelopes.<sup>32</sup> But you could also buy the DVDs to own, just as a dot-com named Reel.com was offering at the time. The problem was, neither option proved very profitable; as other ecommerce companies had learned, for such small-dollar items, the shipping costs really ate into margins. When Reed Hastings moved from being merely Netflix's biggest investor and advisor to becoming its full-time CEO in 1999, he discontinued the retail sales, and the company began experimenting with different rental schemes in an effort to find profitability. The model Netflix settled on in September of 1999 was originally called the "Marquee" plan. Subscribers paid \$15.95 per month for the privilege of renting four (later, just three) movies per month. If you finished one movie, you simply mailed it back and Netflix would send you another. There were no other fees—especially no dreaded late fees. Hastings called the new program a "near DVD-on-Demand service."<sup>33</sup> Netflix's rental volume increased by 300% in just three months.

Even though it stumbled upon the strategy accidentally, Netflix would cleverly use the "no late fees" mantra as a way to position itself as the populist champion of the consumer. "Movie renters are fed up with due dates and late fees," Hastings would tell the press. "With no due dates, our customers can stock

up on rental movies and always keep a few on the top of their television, ready for impulse viewing.”<sup>34</sup> Certainly, fining your customers for using your service is never a popular business model, but late fees accounted for as much as 13.4% of revenues for a rental chain like Blockbuster.

Eliminating the late fee made for friendly headlines, but it was not what made Netflix take off.<sup>35</sup> What mattered was that Netflix too had learned the key lesson of retailing in the Internet Era: unlimited selection, (near-) instant gratification. Whereas a typical brick-and-mortar video rental store carried 3,000 titles, Netflix carried tens of thousands.<sup>36</sup> With Netflix, you could almost always get a movie you wanted to see. Compare that to the experience at a typical Blockbuster, where limited inventory meant one in five shoppers went home empty-handed. New releases were often rented out by other customers, so typical Blockbuster customers had to visit a store five consecutive weekends before they could actually take home the movie they wanted.<sup>37</sup> Blockbuster even had an internal term for this experience: “managed dissatisfaction.”

And more important, Netflix’s combination of a website storefront coupled with postal delivery proved infinitely more suited to satisfying modern customers. Early on, Netflix introduced the “Queue.” You could browse the site and make a list of the movies you wanted to see, much like Amazon’s shopping cart. Every time you returned a DVD to Netflix, it would automatically ship out the next title in your queue. The average number of movies in a customer queue was around fifty and went a long way to endearing customers to the service by making it feel personal. “It’s our biggest switching cost,” Hastings would later say, a prime reason users stayed loyal.<sup>38</sup> Netflix became a platform to cultivate your individual cinematic tastes.

Netflix also concentrated on other advantages the web made possible. Copying Amazon’s Recommendation Engine, as well as DVD retail competitor Reel.com’s pioneering Movie Match technology, Netflix developed its CineMatch movie recommendation system. Users were prompted to check out movies they might like based on previous titles delivered from their queue. Netflix invested heavily in this technology, hiring mathematicians and computer scientists to tweak the algorithm to include recommendations based on the habits of subscribers with similar taste. Netflix’s recommendation engine proved so uncannily good at predicting what you might want to watch that, eventually, nearly 70% of the movies that users chose for their queues were recommended by the algorithms.<sup>39</sup> This was convenient for Netflix because it allowed for greater inventory and cost controls than a brick-and-mortar store could realize.

Whereas nearly three-fourths of total rentals at a Blockbuster were for new releases, at Netflix, seven out of ten DVDs rented by subscribers were titles with release dates older than thirteen weeks.<sup>40</sup>

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AS HAD HAPPENED WHEN Amazon first began to challenge the big-box retailers, most people assumed that once Blockbuster turned its attention to online video rentals, Netflix would be crushed. In 2002, Blockbuster spokespeople were already dismissing online rental services as “serving a niche market.”<sup>41</sup> But soon enough, the entire rental industry began to feel the pressure of online competition. By 2002, Netflix had attracted 750,000 subscribers, which, while only representing 2% of the video rental market, nevertheless caused sales to slip at the rental chains, especially in areas where Netflix was popular.<sup>42</sup> Perhaps two years too late, Blockbuster Online was rolled out as a direct web-and-postal-delivery competitor to Netflix in 2004. As Barnes & Noble had, Blockbuster tried to leverage its physical footprint. You could return movies by mail or at your local store. It also unveiled a “no late fees” program in 2005, which shut Netflix up about that feature, but had the simultaneous effect of costing the company about \$600 million in lost revenue.<sup>43</sup>

Unlike with Amazon and the booksellers, once Netflix began to eat into the video rental market, the decline of the retail rental industry came quickly. At its peak, Blockbuster had more than 10,000 stores and 50 million members.<sup>44</sup> At one time, more people had Blockbuster cards than American Express cards.<sup>45</sup> But by 2010, Blockbuster had only 25 million customers and 4,000 remaining stores.<sup>46</sup> That same year, Netflix announced that it had attracted 13 million members and was mailing 2 million discs daily in the United States.<sup>47</sup> Blockbuster filed for bankruptcy protection on September 23, 2010.

Store closings, layoffs and bankruptcies are often the markers we use to measure the disruptive effects of ecommerce. There were nearly 25,000 individual video rental store locations at the industry’s height.<sup>48</sup> At one point, 60,000 employees wore the blue shirts of Blockbuster.<sup>49</sup> Video stores were once one of the most common retail storefronts in America; there was hardly a neighborhood without one. Today, the few video rental stores left are nearly museum pieces. Netflix won not because it eliminated late fees, but, again, because it understood how consumers’ expectations were changing and moved to satisfy those new expectations. Unlimited selection. Instant gratification.

And Netflix deserves credit for continuing to move in that direction even

after it had conquered DVD rentals. As early as 2002, Reed Hastings was telling *Wired* magazine, “The dream 20 years from now is to have a global entertainment distribution company that provides a unique channel for film producers and studios. . . . In five to ten years, we’ll have some downloadables as well as DVDs. By having both, we’ll offer a full service.”<sup>50</sup> He was talking about video on demand. About Netflix becoming a studio and producing its own content. About streaming. All delivered via the Internet.

“We named the company Netflix for a reason,” Reed Hastings has said on more than one occasion. “We didn’t name it DVDs-by-mail.”<sup>51</sup>