

TECH AGE: ITS IMPACT ON THE SCHOOL SUPPLY INDUSTRY

A Fictional Narrative By Jamey Firnberg

In the 80's I was introduced to new music on FM radio. If I liked a tune enough I would buy the artist's album for about \$10. If I really liked the tune I would buy a book with the guitar chords for another \$10. As my Dad would say, that was a lot of money in those days. That's still a lot of money.

Today, I am introduced to new music via the Internet and satellite, and I listen to genres that will never be played on mainstream radio. If I like a tune I can download it immediately from iTunes for 99 cents from the comfort of my current location. If I really like the tune, I can Google the guitar chords. I can frequently find the sheet music for a nominal fee. If the tune is not available on iTunes (sorry Garth, John, Paul, George and Ringo), and a Google search does not produce sheet music, I don't buy it. I can't tell you the last time I bought a CD.

As technology becomes ubiquitous, what impact will it have on school supply industry?

Digital Rights

First thing Monday morning Joan storms into Jake Ellison's office. She was hacked. "I have been checking out Teechster.com. Lots of the material on the site comes from our books." Joan had been an editor at Universal Teacher Materials (UTM) for over 20 years and she knew every lesson in every book. Jake was the CEO at UTM, one of the largest teacher resource publishers in the school supply industry.

Teechster.com was a peer-to-peer (P2P) file sharing network developed for educators similar to the old media file sharing site, Napster, before it was legitimized. P2P networks allow users to share files in selected directories from their personal computers. Teechster was created by Barry Page, a computer science teacher at Highland Elementary in St. Bernard Parish in Louisiana. Barry started the P2P network at the request of Alice Javelin, a teacher at his school, who was on the Curriculum Development Team for the Louisiana Department of Education. She wanted a place where she could collaborate and share lesson plans and supplemental material with her fellow team members and teachers.

The Curriculum Development Team had been charged with developing a standardized curriculum that would be aligned with state content standards, as defined by grade-level expectations and organized into coherent, time-bound units with sample activities and classroom assessments to guide teaching and learning. The tight curriculum restricted the use of supplemental materials. Some teachers liked it. It was structured and organized, and all the lessons were provided by the state. It would save them time and money. Other teachers did not like it. It took the creativity and spontaneity out of teaching and did not take into account the different levels and learning styles of the students.

The Curriculum Development Team loved Teechster and it soon became the buzz with educators, not only locally, but across the country. Though not quite as successful as when Shawn Fanning jolted the music industry in 1999 with Napster by claiming 25 million users within its first year,

Teechster's user base was impressive. But while Teechster was similar to Napster and the other P2P's, it was also different. First of all, songs have very unique fingerprints. There was no mistaking the source of a song. Unlike songs, identifying the source of an idea could be impossible. A faulty memory or spurious intent allows an individual to be the creator of original ideas. Who owns an idea?

The answer was ambiguous and that was not good for the Teechster community. The P2P users who downloaded and shared songs knew the material was not their own. Teechster users who posted lesson plans and other materials could not always be sure.

There were other problems with Teechster. The quality of the content was questionable. Anybody could share anything. The large number of users meant you could frequently find what you were looking for, but you had to review too many lessons to find one of quality. Also, the formats of the lessons were inconsistent, and the lesson descriptions were often inaccurate. Teachers had to weigh the value of the time it took to search against the value of the lesson. Many were deciding it was a waste of time.

And finally, large communities always seem to attract suspect individuals, those wanting to track your every move on the Internet, and those wanting to erase all the hard drives in the world. Viruses were becoming a major

problem like they did on Napster.

Since UTM was one of Teechster's advertisers, Jake had been watching the site very closely. He thought the Teechster.com revenue model was wrong. Advertisers paid for eyeballs. Contributors risked violating copyright laws and were paid nothing. Users downloaded lessons for free, usually got what they paid for, and sometimes more than they wanted.

Jake knew that by the end of 2004 it was estimated there were over 9 million simultaneous users on the major remaining P2P networks after Napster had been shutdown in federal court by the Recording Industry Association of America's (RIAA) lawsuit. He also knew the remaining networks (including KaZaA and WinMX) had later been shutdown. By the end of 2006 Apple's iTunes had sold over one billion songs, one song at a time. Digital distribution was working.

Jake created a site called TTDCentral.com for The Teachers Directory Central. The concept was simple. Generate a profitable revenue stream with a Website that combined the iTunes one-song-at-a-time micro-payment concept, with eBay's member supplied inventory and ranking system. Incorporate a powerful search, reject or replace duplicates with improved versions, rank lessons on a scale of 1 to 5, and make a contributor's posting and download history permanently available. He would also scan new submissions for viruses and copyright violations.

TTDCentral would use a program called Copyright Cop (The Cop) to insure the originality of newly submitted lesson plans. The Cop code was written by Carl Brin who responded to Jake's request for proposal posted on elance.com, the website where freelancers bid on projects. The Cop was a program that used a hierarchical matching algorithm to parse text strings from newly submitted documents, compare the strings to an index of aggregated documents, and then display a list of documents that had matching strings. Once identified, documents could be reviewed to verify their originality. This would hopefully protect TTDCentral from the liability of a user posting copyrighted material.

A TTDCentral transaction worked like this. A teacher submitted a lesson plan. If it passed the virus scan, the Cop scan, and the editor's review, it was then refined as necessary and assigned to a category and grade level. The

editors would usually rewrite the author's description and make minor edits to the lesson to ensure consistency, and then post it to TTDCentral.com. Teachers could login to TTDCentral.com and search ideas by topic, grade level, contributor, key word, and ranking, and quickly drill down to a usable lesson. Users would pay for downloads, and contributing teachers would receive a commission when their lessons were downloaded. Like the ability to download one song from iTunes without buying a CD, users could download one lesson without buying a book.

Jake launched TTDCentral.com with lessons and other supplemental material from UTM's line books. He had a hard time convincing the board of directors to let him use UTM's lessons because they were concerned about the reactions from their retail and catalog dealers. He thought the only way he could do it was by creating a completely separate company. If anyone complained, simply explain that this was not a UTM site. It was owned by a completely separate company. Sure, the stockholders were the same, but it was not UTM. Dealers would buy that, right?

While Teechster was rapidly growing in popularity it was under constant scrutiny by the International Association of Publishers (IAP). Through IAP, major educational publishers had banned together to protect their copyrights and hopefully shutdown Teechster like the RIAA shutdown Napster and the other P2P media file sharing networks. UTM was a long time member of IAP, and Jake was currently the chairman of the Digital Rights taskforce.

Jake knew if he could shutdown Teechster, TTDCentral would gain traction very quickly. Jake had a plan. He took copyrighted material from all of the major publishers and posted it to Teechster.com in an attempt to goad the other previously reluctant taskforce member's into filing suit against Barry Page, Teechster, and a few thieving teachers. It did not take long for the association to allocate a huge budget and hire the best attorneys to hunt the bad guys down and put the squabash on Teechster.com.

The taskforce ran background checks on hundreds of Teechster's users and decided to target Barry's good friend and teaching associate, Alice. She was hand selected to achieve the maximum media exposure. Named after her restaurateur mother, Alice taught kindergarten at the same school as Barry, Highland Elementary. Highland was one of the first schools to reopen after Hurricane Katrina thanks mostly to Alice and her husband,

Woody. Alice and Woody assembled a group from church, where Woody was a youth pastor, to clean up, reconstruct and reopen the school. They had three children between the ages of two and six. Alice was named Teacher of the Year in Louisiana in 2004.

It was the biggest news to hit the AP since Brittany's unbuckled baby. Deputy Sheriff Stefinaux, the town folk call him "Stefi," who introduced himself as "Brick," fumbled for his bullet as he pulled into the front yard. He took his drug sniffing attack dog, a 14 year old Boston terrier, out for a walk while he waited for the FBI. The media had been there since sunrise.

The swat team took positions in the bushes and the back door, and busted through the front door before Stefi made it back from walking his dog. They moved in, grabbed and cuffed Alice, and walked her out the front door for the cameras. She was wearing a pink dress and a white apron. She had been baking cookies for the Cub Scout meeting this afternoon. Her young children bawled as the swat team drove away with their mother. Deputy Stefi put his bullet in his gun and hurried to the scene of the crime. Alice was booked into the parish prison on two counts of copyright violation.

Barry Page watched the swat team take-down the kindergarten teacher live on CNN. He called his buddy Shawn Fanning to ask for advice. Shawn said "Shut Teechster tonight. The resources it will take to fight the battle against the big bucks of the IPA will bankrupt you and the fight will suck the life out of you." Barry knew he was finished. What he did not know was he had been unscrupulously taken down by Jake the Jerk.

Mike had been a salesman with UTM since its early days. He had survived multiple buyouts, failed strategic plans, and outraged dealers. He loved the industry and his customers. He was the only reason most dealers did business with UTM. However, like everyone else who had been around long enough, he hated Jake the Jerk. On a late night after a few too many gin and tonics, Jake bragged about his nefarious plan that sent the kindergarten teacher to the slammer.

After hearing that story, Mike had had enough. Armed with the name of Carl Brin, the programmer of the Cop, he called Barry Page with the dirt. Barry had actually met Carl at a Digital Right Management conference last year. Barry knew that programmers usually left "backdoors" to in their code. Backdoors were intentional security breaches written into programming code that would

allow the programmer access to wreak havoc on a program in the event payment was not received.

After hearing about how Jake set up Barry and Teechster, Carl was more than happy to assist. Carl denied the backdoor myth and stated, "Even if there was a "backdoor", which there is not, that would not be necessary. There is another way we can avoid the Cop scan." Carl really did not want to have to hack into his program and admit the myth was true.

They called the project Cop Buster. Evading the Cop was not that difficult. Carl wrote a script that would insert random white font characters in all the spaces of a document that would make the phrase patterns unrecognizable. The scheme would probably not go undetected for long, but long enough to accomplish their goal. Plus, it was too simple to draw scrutiny as a "backdoor" job. It took him less than an hour to develop. They ran the Cop scan on twelve identical documents and it returned no matching phrase results.

The sting was on. Using Carl's overseas contacts, Barry gradually loaded TTDCentral with copyrighted lessons just like Jake did to Teechster.

Jake was ecstatic. His site was taking off. He knew technology enabled word of mouth to travel at exponential speeds, but he had no idea TTDCentral would grow that fast. He had to hire three new editors to keep up with the submissions. He was also surprised at the quality of the submissions. Almost every lesson plan was in the proper format, contained original concepts, and passed the Cop scan. He started planning his retirement and dreaming about an airplane with a California king-size bed and hammocks.

The Digital Rights taskforce meeting was beginning. Jake called the meeting to order and distributed his report detailing how the efforts of the taskforce successfully shutdown Teechster.com and the thieving educators. Of course he left out the part about planting documents. Suddenly the meeting room door busted open. With a bottle of champagne in one hand, a big cigar in the other, and sporting a Teechster.com t-shirt he said, "Ladies and gentleman, my name is Barry Page."

To be continued.

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