



The 2011 Emergent Technologies Report

by Douglas Atkinson

Box Office
Physical Audiovisual Media
Digital Delivery
Ebook
Netflix
3D
Piracy
Cloud Computing
Music

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Introduction

“Thanks to higher ticket prices, and loads of costlier IMAX and 3D presentations, the North American box office will pass the \$10b mark in 2010.”¹

Talk about “damning with faint praise”; indeed, the opening line of this article perfectly exemplifies the ever-increasing predilection of many technology writers of blogs, posts, online and print articles to spin statistics to support a point of view to which they are already predisposed. This “stealth” editorializing in the guise of objectivity can take very subtle forms, as evidenced by the above quote, which is quickly followed by the hammer: “Attendance was actually down 5.36% last year, the biggest drop-off rate since 2005. In fact, despite the rosy box-office dollar figures, 2010 will turn out to be the second-least attended year of the early 21st century.”²

And probably the most profitable. But let’s not let facts stand in the way of our agenda; rather, we’ll leave out the ones we don’t like and include the ones we like – but devoid of context just in case those particular facts don’t support our point of view; for example, the fact that a massive recession is still gripping the United States might, just might, affect consumer discretionary spending on activities such as going to the movies, as would the rise to prominence of new media engines which are challenging the traditional entertainment platforms.

So as professionals we must always remember that conflicting forces are locked in a ferocious struggle to channel the industry in the direction which most benefits each. We also need to be aware that the competing camps and their agents have figured out that “reports”, and “reporting”, and blogs and posts and articles and so on can be factually reported but still spun to serve respective agendas, to the point where it is becoming increasingly difficult to find objective technology writing. Granted, much of this spin-laced reporting is not deliberate, because there are actually writers who appear to want one form of media delivery to succeed versus another for no other reason than they are fond of it. Many probably don’t even realize that they’re biased. But there are others who are clearly allied to a particular camp and under the guise of reporting attempt to determine the shape of things to come, which is good to know when one is seeking to make an informed, professional decision about which direction would best serve the library and its patrons. So we don’t need spin. We need facts, unadorned but not isolated, and to always keep in mind that there is a huge difference between context and bias.

As always, the intent of the 2011 Emergent Technologies Report, like its predecessors, is to provide an overview of the currently predominant media technologies, emerging technologies, and technologies which will likely become commercially available in both the near and relatively distant future. And again as always, we have done our very best to gather and annotate the assembled opinions and predictions of industry observers for the use of our readers, and have refrained (for the most part) from making predictions of our own.

Douglas Atkinson (angels3k@me.com) June 17 2011.

¹ Alt Film Guide: “North American Box Office Passes \$10 Billion Mark in 2010” by Zac Gille, December 29, 2010

² Ibid.

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Box Office

It may seem odd that we are beginning a report on established and emerging technologies in 2011 by discussing a technology which originated in the late nineteenth century (motion pictures), but the reason we do so is rather simple: since our reports have primarily focused on audiovisual technologies³ from the very beginning (the original DVD whitepaper in 2000), and since – like it or not – it is big bad Hollywood which drives the adoption of new audiovisual technologies, and since the cinema is *still* the progenitor of all of Hollywood’s marketing strategies, it follows that, as goes the cinema, so goes everything else that Hollywood does. And if the revenue Hollywood generates from the box office – which was a tidy 10.33 billion⁴ in 2010 – were to suddenly and precipitously decline (like one of those speculative Nat Geo shows), everything in the way the studios do business (or do *not* do business) would change, quickly and dramatically.

The Second Worst Year Ever

To convey the sense of concern (perhaps *panic* would be a better word) or barely concealed glee that any apparent weakening at the box office generates in the media, we offer additional evidence of said from the acidic Perez Hilton in his January 2011 article “*2010 was the second-worst year since 1996 for Hollywood box-office*”.

“Thanks to inflation and the absurd cost of a 3-D movie ticket, box office revenues rose above \$10 billion for only the second time⁵, but only 1.35 billion tickets were sold. That’s the lowest amount of tickets sold since 1.33 [billion] were sold in 1996. Attendance dropped 5.4% last year compared with 2009 and the largest drop since attendance fell 8.1% in 2005.”⁶ (note the use of the terms “inflation”, “absurd” and “only” (twice, no less) to describe a massive \$10 billion dollar haul).

So let’s shove Mr. Hilton’s point into context. 2010 was not only the second-worst year ever (in terms of attendance), it was also (in terms of revenue) *the second best*.

GLOBAL BOX OFFICE REACHES RECORD HIGH IN 2010 *International Market Increases 13%, Domestic 3D Soars*⁷

Wow. It almost stretches credibility to think that these cheerful sunny-side-of-the-street studio types (with - it should be noted - a *huge* vested interest in box office performance) are actually reading the *same stats* as Perez Hilton. But in fact they are, proof positive being that they have posted identical figures to support their directly opposing claims. So what is to be made of this? Each party has an agenda. The MPAA’s agenda is obvious. The box office is critical to the health of Hollywood. The studios need the billions generated by their big tent films in order to make more big tent films to make more billions so they can make more big films and so on ad infinitum (in their dreams, anyway). As for the uber-flamboyant Perez Hilton (a.k.a Mario Armando Lavandeira,

³ We are expanding the scope to include music, ebook and a whole bunch of other cool stuff this year

⁴ Even this figure varies from source to source

⁵ 2009 was the first time.

⁶ Perez Hilton.com: “2010 Was The Second-Worst Year Since 1996 For Hollywood Box-Office” by Perez Hilton, January 03 2011

⁷ Motion Picture Association of America, Inc.: “Theatrical Market Statistics Report Press Release” February 23, 2011

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Jr.), his motivation is equally obvious: he is a gossip columnist who uses controversy to acquire mindshare.⁸

So let's filter out the distracting spin issuing from the various sources and focus solely on the unadorned facts. That way we can clearly see Hollywood's current situation with respect to the cinema:

The unadorned 2010 box office stats

According to two separate sources (the MPAA and the New York Times):

- Global box office receipts increased 8% to reach an all-time high of \$31.8 billion.⁹
- The North American theatrical market basically "repeated its peak performance from last year", beating somewhat pessimistic third quarter projections but remaining even at \$10.6 billion, despite "a boom in sales of higher-priced 3-D tickets."¹⁰
- International box office increased by 13%.¹¹
- Largest growth was in the Pacific Rim, which grew by 21%, with 40% of that growth coming in China, even though the country is described as a "restricted" market.¹²
- Admissions in North America fell 5% to 1.34 billion, or to 4.1 per individual on a per capita basis (from 4.3 in 2009).¹³
- The 3D market was a key factor in North American revenue, making up 21%, a ten-fold increase in 3D box office from 2008 levels.¹⁴
- 11% of the population (so-called "frequent moviegoers") bought over 50% of all tickets sold¹⁵ (on its own, out of context, this could be interpreted as alarming, were it not for the next point):
- The number of "frequent" movie-goers increased from 35 to 38 million, an increase of 8.6%, while the number of occasional moviegoers declined (no figure provided by any source on the latter category).

In other words, theatrical revenues virtually tied 2009 for an all-time high in North America (thanks to the popularity of 3D technology and a loyal customer base which increased by almost 9%). Another positive was the international box office, up 13%. On the negative side, marginal moviegoers didn't go the movies as often as in the past, which is a trend that concerns the MPAA executives. I don't blame them.

Still, it doesn't sound like the end of the world just yet, though the stats from the first quarter of 2011 are not as encouraging... at least at first glance.

⁸ For a definition of this term please refer to pg 55 (Netflix whitepaper), or the *2010 Emergent Technology Report*

⁹ Motion Picture Association of America, Inc.: "Theatrical Market Statistics Report Press Release" February 23, 2011

¹⁰ New York Times: "Moviegoing Leaps, Except in North America", by Brooke Barnes, February 23 2011

¹¹ Motion Picture Association of America, Inc.: "Theatrical Market Statistics Report Press Release" February 23, 2011

¹² Ibid.

¹³ New York Times: "Moviegoing Leaps, Except in North America", by Brooke Barnes, February 23 2011

¹⁴ Motion Picture Association of America, Inc.: "Theatrical Market Statistics Report Press Release" February 23, 2011

¹⁵ Ibid.

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Box office slump in the first quarter of 2011

Despite the hyperbole and spin from the various sources, the legitimate problem of bad moviemaking has a greater potential to cripple the film industry than ever before. This is because Hollywood films now *have* to succeed, simply because Hollywood is making fewer films, and many of these are much bigger and far more expensive (the aforementioned “big tent” films). So if they’re stinkers.... well, to reiterate: *as goes the cinema, so goes everything else with Hollywood*. Failure at the box office is not an option as we enter the second decade of the 21st century; in fact, it hasn’t been an option for a few years now.

Cue scary music...

“The combined box office earnings of films that came to disc in the first three months of this year was [*were*] down 25% from the value [*box office earnings*] of films that came to disc in the first quarter of 2010, DEG reports.”¹⁶

Now, when the reader is presented with this statistic, it sounds like a major disaster, doesn’t it? Well, it certainly would seem so, at least according to CNBC’s Fast Money column, which featured the following lurid headline in March of 2011:

Box Office Bomb: Hollywood Receipts Down 20% This Year¹⁷

Obviously, as the alarmist term “bomb” would suggest, the news of this “staggering drop in the box office value of movies”¹⁸ was considered a disaster in its own right; and as usual it caused a minor media uproar; worse, several pundits pointed out that the “bomb” had also apparently had an equally catastrophic impact on disc sales.¹⁹

And in all the media hue and cry, in all the tortured explanations for the box office meltdown, they even blamed Easter. Yes, Easter, because it was late in the month; I mean, come on: blaming *Easter*? Someone stop that Bunny! But in the midst of all the furor emerged a little voice of reason which quietly pointed out: “If you are to believe the press, theatrical box office receipts have fallen off a cliff in the first quarter of 2011, for reasons ranging from crappy movies to high ticket prices to bad economic times.”²⁰ But in fact, as review site *The Buff* points out, the “disastrous” U.S domestic ticket sales (\$168 million through the first weekend of March 2011), actually exceeded the numbers for the same period in both 2008 (138m) and 2009 (148m); and the real reason for the apparent 2011 first quarter plunge was only because it was being compared to the unnaturally *huge* box office returns through the first weekend of March 2010 (253 million). So the next question is: why was 2010 atypical? And the answer is:

Avatar.²¹

¹⁶ Home Media Magazine: “Low Box Office Blamed for Disc Spending Drop” by Thomas K. Arnold, May 02 2011

¹⁷ CNBC Fast Money: “Box Office Bomb [etc.]” by John Melloy, March 23 2011

¹⁸ Ibid.

¹⁹ See: “Physical Audiovisual Media” pg 16.

²⁰ The Buff: “2011 Box Office Disaster – What’s Going On?” by La Sporgenza, April 03 2011

²¹ Ibid.

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Blame it on James

Yes, James Cameron's monster hit, the reigning heavy-weight box office champ and biggest selling movie of all time in *any* format, was wildly inflating sales all down the food chain at the end of 2009 and the first quarter of 2010. So there actually is no 2011 box office disaster, just an inadvertent comparison with the box office 1st quarter of the previous year; in fact, other than that 1st quarter of 2010, the 1st quarter of 2011 is actually the best 1st quarter that Hollywood has seen for a long, long time.

And once again, we come back to it: context. But the main problem with context is... it doesn't sell. The end of the world sells. Death, disaster, financial ruin, the collapse of civilizations (*Jersey Shore*, anyone?), these all sell... very, very well.

And as for the box office itself, which had been, for a few days anyway, touted by many in the media as virtually deceased, it's back to business usual in the second quarter, hauling in the big crowds with another succession of weekly blockbusters, and all the panic seems to have, for the moment at least, subsided.

Stay tuned.

But in the meantime, there is that small issue of the correlation between box office performance and sales of physical audiovisual media; that is, DVD and Blu-ray, and how the interpretations of those sales stats have now been skewed by an atypical year to support more predictions of doom.

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Physical Audiovisual Media

Back a few years ago, the industry used to report on standard and high definition separately, as distinct entities. Now, tellingly, the main juxtaposition is between physical and digital: DVD and Blu-ray versus streaming and downloading, and print materials versus ebook. In fact, only one article I've reviewed this year actually reported on DVD alone without including Blu-ray revenue.²² Similarly, this year's report will deal with all the current and upcoming physical audiovisual media formats in one whitepaper.

At first glance, the statistics seem to support the view that "2010 wasn't all that bad".²³ Both Blu-ray and digital delivery grew, dramatically in fact, but not quite enough to make up for DVD's 12 percent drop, prompting among other things this interpretation: "...a new reality has settled on Hollywood, rooted in the acceptance that the double-digit growth the industry experienced in the early 2000s will never happen again, at least not for packaged media – and that Netflix and Redbox have altered the landscape for not just the rental sector but for the entire business."²⁴ But even without factoring in the spectre of digital delivery, which grew like a weed in the fourth quarter of the year, Netflix's mail-order physical media subscriptions and Redbox's dollar-a-night kiosks were already shifting the balance of studio revenue from highly profitable physical sell-through to not-so-profitable rentals.

Steve Beeks, president of Lionsgate, called 2010 "the year of transition," and said: "We saw explosive growth for Blu-ray sell-through and on-demand platforms, each of which will approach or surpass \$2 billion in spend[ing]."²⁵ Mr. Beeks' prediction was accurate. Both formats did indeed surpass the 2 billion mark, with Blu-ray coming in at 2.3 billion and digital coming in at 2.5 billion, while DVD "slumped" to 14 billion.²⁶ Oh yes, there's that context thing again. DVD's "slumping" 2010 sales were still good enough to outsell both new formats combined by *9.2 billion*.

Now would probably be a good time to roll out those aforementioned unadorned facts, courtesy of the Digital Entertainment Group's 2010 Annual Report²⁷:

U.S. CONSUMER HOME ENTERTAINMENT RENTAL & SELL-THROUGH SPENDING²⁸

(in billions) Year	VHS/UMD	DVD	BD/Hi- Def	Digital	TOTAL
2009*	\$0.0	\$15.8	\$1.5	\$2.1	\$19.4
2010	\$0.0	\$14.0	\$2.3	\$2.5	\$18.8

**The DEG re-stated its historical figures based on 2009 revised reporting from Rentrak Corporation's Home Video Essentials and studio sources.*

²² SNL Kagan: "The Economics of TV and Film"

²³ Hollywood Reporter: "Netflix and Redbox gained in 2010 as DVD sales slid" by Thomas K. Arnold, December 27 2010

²⁴ Ibid.

²⁵ Ibid.

²⁶ Digital Entertainment Group: DEG Year-end 2010 Home Entertainment Report, released January 06 2011

²⁷ Ibid.

²⁸ Chart courtesy of Digital Entertainment Group: DEG Year-end 2010 Home Entertainment Report, released January 06 2011

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The two big questions

Very well, all hyperbole and cheerleading aside, it would appear that DVD is indeed on the wane. It is no longer the best audiovisual format. It's not even the best *physical* format. Blu-ray is better, and it can deliver a 3D experience. Digital is cheaper and more convenient and, depending on several factors²⁹, can also be better. DVD has always been a sell-through animal, but audiences are turning away from purchasing content to renting it, either on a pay-per-view basis or through subscriptions, both physical and digital. Add in the exponentially improving quality of digital delivery combined with the unprecedented proliferation of viewing options, and the inescapable conclusion is that DVD is slowly being pushed towards the edge of the cliff. But if this is the case, there are still two obvious and important questions left for future planners to contemplate:

When will the era of DVD end, and *what* format, physical or virtual, will replace it?

The studios' ideal transition scenario

One DVD-ending initiative comes from the studios themselves. They want to put the crown prince, Blu-ray, on the throne, as quickly as possible, before digital eats them alive. Their ideal scenario would have DVD vanish overnight without consequence, immediately after which every ex-DVD player owner on the planet (or at least those who do not already own a Blu-ray player) would rush out to buy a high def machine for the temptingly low price of \$39 dollars USD (their current low ball price point). And, again ideally from the studios' standpoint, sales would not miss a beat; in fact, they would go up, as the higher priced Blu-ray format floods in like the tide to fill the void. But this of course is not going to happen overnight (and maybe not even at all), because much as the content producers would like to make it happen, they can't, for a number of reasons.

Blu-ray is not a paradigm change³⁰

Many consumers who have not experienced the difference in picture and sound quality between DVD and Blu-ray are perfectly happy with the way their DVDs look on their big new flat-screen TVs, as are those who *have* experienced the difference and just don't care. A significant percentage of them don't even know the difference between standard and high definition resolution... and also don't care. But this alone would not be enough to prevent the studios from simply ending DVD and pushing everything into Blu-ray, and devil take the hindmost. But there is a second, even more serious reason which is holding them back.

Blu-ray is not yet at critical mass

Even though Blu-ray's sales growth is healthy in itself (68% in 2010³¹), when one places those numbers in context it's not so impressive: Blu-ray's share of the 2010 entire audiovisual media market (including digital) was only 12.23%, whereas DVD still stands at a robust 74.47%. Placing this in further context, Blu-ray's real sales increase - \$800m over last year - was not enough to compensate for even *half* of DVD's sales decline of 1.8 billion. So the studios cannot just dump DVD. The sales growth they would require from the remaining formats would have to be hyperbolic, and there is no guarantee of that; and finally, even if Blu-ray was at critical mass, the studios cannot simply impose

²⁹ ISP provider and/or regional bandwidth restrictions and/or the viewer's individual technological capabilities

³⁰ Please refer to the Sweeting quote on page 16

³¹ Digital Entertainment Group: DEG Year-end 2010 Home Entertainment Report, released January 06 2011

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the successor format on the marketplace because they have lost the single most important advantage required to do so: a technological monopoly on the way people consume content. In short, viewers now have a choice.

The spectre of digital

With an irony approaching that more usually found in a Shakespearean tragedy, the studios have created the very monsters which are now threatening their existence. They did this over the past few years by dishing out favourable discounts to high-performing mail-order rental service Netflix and its robot-cousin, kiosk gorilla Redbox, effectively colluding in Netflix's destruction of Blockbuster³² and Redbox's devaluation of physical media through \$1 a night rentals. But then suddenly the Netflix monster broke the physical format restraining straps, climbed off the gurney and - rebranding itself as a streaming service - staggered out of the laboratory and into the digital countryside, where it is wreaking havoc with the entire entertainment ecosystem. Redbox, straining at the leash, is getting ready to do the same. And both of them will drag their enormous buying power with them. And to make matters worse, Netflix's burgeoning synonymy with streaming has awoken the sleeping giants: Amazon, Google, and Apple. These behemoths, seeing the writing on the wall, are now stomping around in the digital marketplace as well.

The studios' terrible dilemma

All this could easily force the studios to alter their primary business models and further delay, if not cancel altogether, the coronation of Blu-ray. So the studios are on the horns of the proverbial dilemma: on the one hand the studios need to be very, very cautious and soft spoken about the transition to Blu-ray; on the other hand, it has to happen as soon as possible.

Very well, but when *is* "as soon as possible"? The only answer is the same answer provided through the years, and it is not very satisfactory:

"When the studios *make you switch.*"

All right, but *how* will we know when they are going to make us switch?

Well, actually, they are making us switch right now.

The stages of the DVD apocalypse

It is now apparent that the replacement of DVD by Blu-ray will follow the same basic pattern in which VHS was replaced by DVD in the middle of the previous decade. This is not conjecture. It is happening now, and the parallels are distinctly similar. The transition is being accomplished in distinct stages, all initially affecting only feature film theatrical releases. This is because children's shorts, TV series, non-fiction and everything else will eventually migrate to whatever formats the big movies are using.

The VHS to DVD transition: a historical comparison

In the VHS transition scenario, there were three stages which played out as follows:

Stage 1: The studios started releasing deep back-list titles only on DVD.

³² See "The Fall of Blockbuster" pg 13

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Stage 2: Current, less popular films started appearing only on DVD.

Stage 3: The major new theatrical blockbusters finally appeared only on DVD (which of course immediately spelled the end of the VHS format).

The DVD to Blu-ray transition

With the transition from DVD to Blu-ray, we are actually seeing four stages, the second of which was accompanied by a subtle advertising change, while the third, which we have already entered, is characterized by a recent – we could politely call it “unique” - marketing initiative. The stages are playing out as follows:

Stage 1: The studios started releasing deep back-list titles only on Blu-ray (this became more and more common as 2010 progressed).

Stage 2: The studios began releasing new titles *with the special features only on Blu-ray*, while the DVD releases of the same title came out with no special features, a sort of reprise of their disastrous 2009 “rental” version policy. At about the same time, print and television ads for DVD/Blu-ray releases, which had historically been billed as “now available on DVD (larger print) and Blu-ray (smaller print)”, were now being billed in the reverse as “now available on Blu-ray (larger print) and DVD (smaller print)”. It is subtle signs like these that truly tell the tale.

Stage 3: This stage began with films being released in a bizarre Blu-ray/DVD “combo pack” format, which consisted of a Blu-ray with Blu-ray packaging and which also included a free DVD (instantly devaluing the DVD format, of course, which may very well have been intentional). The titles released as combo packs were *not* available on DVD alone. So libraries which were not yet building Blu-ray collections were forced to buy the Blu-ray *just to get the DVD*, which was bad for three big reasons; one, the price was exorbitant; two, the combo pack comes only in Blu-ray artwork and packaging; and three, the “free DVD included” won’t continue indefinitely, meaning that some libraries, ordering the Blu-ray to get the DVD, will eventually end up with just the Blu-ray. Ouch.

And finally, one studio (Sony/Columbia) went all the way and released three significant new releases just on Blu-ray. The titles were *The Illusionist*, *Another Year*, and *Barney’s Version*, all of which were low box office performers, but well reviewed and highly regarded, the type of title which would historically do very well on physical media: there was some hue and cry, but only *Barney’s Version* was belatedly scheduled for release on DVD (June 28 2011).

Stage 4: The major new theatrical blockbusters will appear only on Blu-ray, which of course will spell the end for DVD. At this point stage 4 seems inevitable, though *when* is still a matter of fierce debate among the pundits. It is difficult to predict when the studios will “shoot it all” as they say in craps, and all we can do until then is to just continue watching for the signs. But for those libraries who have not yet begun building a Blu-ray collections, I stand by my advice of the previous years, now that Blu-ray is back compatible, now is probably as good a time as any to start with the format.

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The cautious transition to Blu-ray

Again, the very timid nature of this recent market test by Columbia simply reinforces the strong impression that the studios are making the transition much more cautiously this time around. And they are certainly still strongly supporting the format, for good reason: "According to figures compiled by Swicker & Associates, more than 170 million Blu-ray discs shipped to market in 2010, but in the fourth quarter alone nearly 343 million DVDs were shipped to retail outlets; so DVDs aren't exactly on the ropes by any stretch of the imagination."³³ Perhaps not, but nonetheless...

An ominous sign from Netflix

In mid-January the following friendly announcement appeared on the Netflix blog:

"Hi there, it's Jamie Odell, director of product management at Netflix, with an update for members who add DVDs to their Queue from the device they use to watch instantly. We're removing the "Add to DVD Queue" option from streaming devices. We're doing this so we can concentrate on offering you the titles that are available to watch instantly. Further, providing the option to add a DVD to your Queue from a streaming device complicates the instant watching experience and ties up resources that are better used to improve the overall streaming functionality. This change does not impact the Netflix Web site, where most members manage their DVD Queues."³⁴

(Is anyone else reminded of Galaxor's hideously cheerful press release announcing the end of the human race in Monsters versus Aliens, or is it just me?)

Associations aside, there are many ways to interpret this seemingly innocuous little post. Face value would logically be one of those reasons, while a full-blown conspiracy to destroy physical media is, apparently, another.

The title of an article in Movie Talk on Yahoo! Movies, which generated a 9340 comment firestorm, perfectly encapsulates the sentiment generated by Mr. Odell's post: "Netflix is Abandoning DVDs, Customers Who Prefer DVDs."³⁵ Now that doesn't exactly sound impartial, but given that Netflix has already offered its streaming subs a lower rate while increasing the rate for DVDs and adding on another surcharge for Blu-ray, one can understand why the company's loyal decade-old physical media rental customer base might be getting the perception that the company "knows that the future is moving away from physical discs and towards instant access."³⁶ Further, one could argue that 9000 plus angry responses from incensed customers who evaluated the change as "bad", "foolish", and "horrible"³⁷ was evidence of a certain sensitivity in that regard. It would seem that there are still a *lot* of physical media fans out there.

³³ DVDtown.com: "DEG end-of-year report reveals Blu-ray sales rose 68 percent", by James Plath, January 07 2011

³⁴ The Netflix Blog: "Removing 'Add to DVD Queue' from Streaming Services" by Jamie Odell, January 17 2011

³⁵ Movie Talk on Yahoo! Movies: "Netflix is Abandoning DVDs, Customers Who Prefer DVDs" by Tim Grierson, January 18 2011

³⁶ Ibid.

³⁷ Ibid.

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The fall of Blockbuster (and great was its fall)

In September of last year Blockbuster U.S. declared bankruptcy.³⁸ Oh, it stumbled around for a few more months, a dead albatross of debt rotting around its neck, until the U.S. Justice Department suggested, somewhat trenchantly, that Blockbuster upgrade its level of bankruptcy. Shortly thereafter Dish Networks purchased the once-mighty company (there are various “guesstimates” as to the purchase price).³⁹

There was no other option open. Blockbuster’s only chance at independent survival would have been to re-invent itself as Netflix did, and either go the kiosk route, or the digital route, or both. But that was impossible. It was, very simply, up to its neck in debt: broke. Had the company been flush with cash, it could have used its sweetheart studio release date deals to mount a serious challenge. But kiosk infrastructure and digital licensing fees require a massive upfront capital investment, and Blockbuster simply could not marshal the necessary resources.

The future of the beast

No one knows what Dish Networks is going to do with its new acquisition, but speculation is that “Blockbuster’s streaming content will be delivered through Dish’s variety of Android, iOS, and BlackBerry apps, as well as through hardware such as DVR players and Web-connected TVs.”⁴⁰ As for Blockbuster Canada, the subsidiary north of the border, it was actually still tootling along making a tidy little profit when the studios, owed somewhere in the region of 67 million (USD) by Blockbuster U.S., pushed the Canadian subsidiary into receivership. Apparently Blockbuster Canada had been used as collateral by its U.S. parent to secure product purchases from the studios.⁴¹

One thing is certain, it will be a long time before Blockbuster U.S. is buying huge quantities of physical media again, if ever, and that is where the true story lies, at least as far as DVD and Blu-ray are concerned. Blockbuster is gone, maybe never to return or to return in a very different form. Both Netflix and Redbox are in the midst of a transition from physical media to digital, but not just any digital either; specifically, to *streaming*. There is strong evidence that even EST is being eclipsed.⁴²

For Blockbuster Canada, the final ignominy

“*[Dish Networks wants]* to sever ties with its former Canadian subsidiary by forcing Blockbuster Canada to rename itself, but the receiver tasked with selling the Canadian chain is asking a U.S. court to ignore the request...”

“... the 400 *[Blockbuster stores]* have been operating under the banner since 1990.

“There is no word yet on any resolution to the dispute.”⁴³

³⁸ Business Insider: “Blockbuster Declares Bankruptcy” by Gus Lubin, September 22 2010

³⁹ Today@PC World: “Dish Networks Buys Blockbuster” by Brendan Slattery, April 06 2011

⁴⁰ Ibid.

⁴¹ Globeandmail.com: “For Blockbuster Canada, the closing credits roll” by Steve Ladurantaye, May 06 2011.

⁴² See “Digital Delivery, page 22

⁴³ The Globe and Mail: “Receiver to close up to 140 Blockbuster Canada stores” by Steve Ladurantaye, May 24, 2011

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Massive sources of studio revenue are vanishing

Anyway, the point of all this is that many of the studios' traditional packaged media sell-through channels are either changing their format focus or going under. Unsurprisingly then, SNL Kagan's 2010 "Economics of TV and Film Report" indicates that "wholesale revenue of DVD" was down significantly last year.⁴⁴

DVD down in the first quarter

Therefore, it should come as no surprise that 2010 DVD sales were down 11% from 2009, and are down again in the first quarter of 2011, this time by an unnerving 19.9%. But once again, even accurate statistics in the absence of context can be completely misleading. So let's add the context:

"Over the past three months [01-03 2011], 77 percent of consumers reported watching a movie on a DVD or BD [Blu-ray], which is unchanged from last year... By comparison 68 percent watched a movie on a TV or cable network, channel, 49 percent at a theatre, and 21 percent used paid video on demand through their TVs... consumers reported that 78 percent of their home video budgets went to the purchase and rental of DVD and BD [Blu-ray], including online and in-store retail purchases and rentals, while 15% percent was spent on video subscription services like Netflix... Digital video downloads, paid streaming, paid transactional video on demand (VOD), and pay per view (PPV) comprised the remaining 8 percent."⁴⁵

Okay, so suddenly disc is *not* dead? Does that mean that DVD is going to remain a market force for the next ten years? Five? Three? No one can say with any authority.

And trying to get answers didn't get any easier as 2011 began. In February of this year, Jeffrey Katzenberg, the CEO of DreamWorks animation, made the observation that: "The box office is no longer indicative of home video success, as it has been historically."⁴⁶

One would assume then, that the corollary would hold true; that is, that *poor* box office performance is no longer indicative of *poor* home video sales, but that apparently is actually *not* true, for poor box office showings are being blamed for the plunge in DVD sales in the first quarter of 2011. According to the following Los Angeles Times by-line: "Consumer purchases of newly released DVDs fell precipitously in the first three months of the year – declines that were not made up by gains in sales of Blu-ray discs or emerging streaming services."⁴⁷

The reason given for this by Home Media Magazine was: "The few stories [*about the DVD sales drop issue*] that did surface blew right through the box office correlation..."⁴⁸ This implies that there *is* a direct correlation being between poor box office performance

⁴⁴ Home Media Magazine: "Report: DVD Wholesale Revenue Fell 44% 2010" by Erik Gruenwedel, May 12 2011.

⁴⁵ NDP Group Press Release: "DVD and Blu-ray Disc (Still) Dominate[s] Home Video Movie Viewing and Spending" by Lee Graham, April 18 2011

⁴⁶ Home Media Magazine: "DreamWorks Profit Up, but Katzenberg Notes DVD Concerns" by Chris Tribbey, February 24 2011

⁴⁷ Los Angeles Times: "Home entertainment sales on DVD, Blu-ray are off 19%" by Dawn C. Chmielewski, May 02 2011

⁴⁸ Home Media Magazine: "Disc sales Enter Era of New Reality" by Thomas K. Arnold May 4 2011

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and poor home video sales. So if Katzenberg says that good box office *doesn't* necessarily translate into good home video sales, and the media says that poor box office *does* lead to poor home video sales, then apparently **nothing** leads to good home video sales. Uh... at this point I'd like to say "you can see where I'm going with this", but I can't. I don't even know where I'm going with this (and neither do they).

Disc business: dead or not?

Now, it's no secret that there is a "preconceived notion that the disc business is dead"⁴⁹, which it most certainly is not; on the other hand, that "notion", as Thomas K. Arnold refers to it, is not based on *nothing* (the current predisposition to Chicken Little journalism notwithstanding).

"... sell-through of packaged discs fell 19.99 percent to \$2.07 billion during the first quarter. Likewise, rentals of physical disks in brick-and-mortar rental locations fell 36.14 percent to just \$440 million."⁵⁰

Oh no, we're doomed! But wait...

"However, the second quarter is off to a strong start, with sell-through up 20 percent in the first few weeks alone." And: "DEG also said that Blu-ray disc sales were up nearly 10 percent compared with the first quarter of 2010."

All right, so sales of the DVD format are *declining*, not *plummeting*, a fact which is confirmed by the old capitalist adage: "Follow the money." Because if Netflix the Streaming Monster is suddenly reconsidering its own physical media strategy, you can bet that they are of the considered opinion that there is still a lot of money left to be made in that department, to wit:

And then suddenly...

"Netflix chief content officer Ted Sarandos – who credits disc for helping Netflix make its foray into streaming – says the subscription rental service plans to turn its focus back to physical distribution."⁵¹

"Sarandos said that... the value proposition of Netflix's disc programs (which include streaming) remains so strong for the foreseeable future that management plans to revisit all facets of the business."

"Netflix currently offers more than 100,000 disc titles and about 17,000 streaming titles." It is no secret that it was cash generated by its huge DVD business that allowed Netflix to write the big cheques for technological development and content.

"Without the success of the DVD business, I don't think we would have had either the investment money or investment courage to put the money we were able to put into streaming," [Sarandos] said.⁵²

⁴⁹ Home Media Magazine: "Disc sales Enter Era of New Reality" by Thomas K. Arnold May 4 2011

⁵⁰ pcmag.com: "Netflix, Video Kiosks Replacing the Local Video Store" by Mark Hachman, May 04 2011

⁵¹ Home Media Magazine: "Netflix Turns Focus Back to Disc" by Erik Gruenwedel, June 02 2011

⁵² Ibid.

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And there's going to be more big cheques to write, so Netflix has very good reasons to ensure that its DVD mail order rental service stays healthy for as long as possible.

Sarandos also reaffirmed a point that many of us have been making for years: the studios' Achilles heel is that, very simply, they can't agree on anything.

"He [*Sarandos*] said efforts by select studios... to promote physical and electronic sellthrough failed without full participation from all studios and retailers."⁵³

Blu-ray on the verge

Beneath this titanic, physical media versus digital struggle, which is chiefly characterized by DVD sales slugging it out with upstart streaming subscription companies, Blu-ray has been quietly growing its sales, matching digital's growth to date; in fact, according to some sources and depending on which digital media are blended into the numbers, Blu-ray sales are actually *outgrowing* digital transactions.

"Blu-ray was the fastest-growing home video medium last year."⁵⁴

The advantage of familiarity

According to the Sociology of Innovation, resemblance of a new technology to a technology which is already in common use is an excellent accelerator for rapid adoption by the consumer marketplace; in that regard, it would be harder to imagine a greater resemblance of a new format to a pre-existing one than that of Blu-ray to DVD (indeed, it was described by Paul Sweeting in 2008 as nothing more than "a fancy DVD player for those who want to get the most out of their HDTV sets").⁵⁵ That familiarity should stand in Blu-ray's favour. And with 3D the current flavour de jour, many 3D-compatible Blu-ray models are being rolled out; as well, many current Blu-ray models, including PS3s, can be firmware upgraded to play 3D as well. Digital has no such competitive advantage... yet.

A helpful drop in the price of Blu-ray discs wouldn't hurt either. "I think the real surge on disc sales is going to happen when disc prices come further down." – Dan Rayburn, Frost & Sullivan analyst and EVP of StreamingMedia.com.⁵⁶

\$39 players won't hurt either.

But even with these advantages, and even though the studios themselves are doing everything in their considerable power to replace DVD with the Hi-Def format, they are not yet ready to push all the chips into the centre of the table. The environment is just too uncertain.

"It is a very scary market," says Matthew Lieberman, director of global entertainment at PricewaterhouseCoopers.⁵⁷

⁵³ Home Media Magazine: "Netflix Turns Focus Back to Disc" by Erik Gruenwedel, June 02 2011

⁵⁴ Home Media Magazine: "Blu-ray Thrives, Despite Growing Digital Bandwagon" by Erik Gruenwedel, January 10 2011.

⁵⁵ *Content Agenda*, December 23 2008 "Next for Blu" by Paul Sweeting,

⁵⁶ Home Media Magazine: "Blu-ray Thrives, Despite Growing Digital Bandwagon" by Erik Gruenwedel, January 10 2011.

⁵⁷ USA Today: "Blu-ray grows, but overall video market doesn't" by Mike Snider, January 06 2011

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"We are seeing substantial growth in Blu-ray sales, but it is such a small part of the overall physical market that it just can't overcome steep declines in DVD,"⁵⁸ said iSuppli analyst Tom Adams, though in another report he said: "Blu-ray remains on track to supplant DVD, albeit with a smaller market size."⁵⁹

UltraViolet System

"*UltraViolet* (UV) is a digital rights authentication and cloud-based distribution system that allows consumers of digital home entertainment content to stream and download purchased content via multiple platforms and devices. With respect to both physical packaged media and digital media, UltraViolet adheres to a 'buy once, play anywhere' approach that allows users to store digital proof-of-purchases under one account to enable playback of content that is platform-and-point-of-sale-agnostic.

"UltraViolet is developed and deployed by the 70-plus members of the Digital Entertainment Content Ecosystem consortium, which includes film studios, retailers, consumer electronics manufacturers, cable companies, ISPs, network hosting vendors, and other Internet systems and security vendors. Apple and Disney do not support this format."⁶⁰

"[Tom Adams] believes cloud-based digital locker UltraViolet has the ability to upgrade the physical market when it takes off. "The idea that buying content on Blu-ray allow[s] you to view it on any device you own today or buy in the future adds a lot to the value of buying a Blu-ray Disc movie," Adams said."⁶¹

Well, we'll have to wait until 2012 to find out, because that's when the cloud service is scheduled for launch. But it has already been fairly convincingly established that the consumer currently appears to be moving away from buying content and towards streaming rentals.

Blu-ray has a future even in the digital age

Even the "streamers", including Dan Rayburn of StreamingMedia.com, think that Blu-ray has a place in a digital future, and a potentially significant one at that; in fact, the format may end up being the game-changer that actually brings the physical and digital media worlds together.

"Rayburn said consumers are not necessarily looking to buy more discs; they are interested to find out more about digital. Since Blu-ray players (and most media players) do not have a hard drive, they represent growth vehicles for rental streaming. He said most consumers remain a hybrid user: occasionally purchasing and at other times renting. He said the Blu-ray player allows them to get their feet wet with digital content."⁶²

⁵⁸ USA Today: "Blu-ray grows, but overall video market doesn't" by Mike Snider, January 06 2011

⁵⁹ Home Media Magazine: "Blu-ray Thrives, Despite Growing Digital Bandwagon" by Erik Gruenwedel, January 10 2011.

⁶⁰ Wikipedia

⁶¹ Ibid.

⁶² Home Media Magazine: "Blu-ray Thrives, Despite Growing Digital Bandwagon" by Erik Gruenwedel, January 10 2011.

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“To me, that is really the win in the long run,” he said. “Blu-ray Disc sales will grow, but Blu-ray is really an enabler for digital.”

Once again, that \$39 price tag won't hurt either.

Blu-ray in the libraries: an update

Suffice it to say that many libraries across North American have Blu-ray collections, and I haven't heard one complaint about the performance of the format. I believe I've covered anything and everything you need to know in both the 2010 Blu-ray Whitepaper and the 2010 Emergent Technology Report, both of which can be made available to you by simply sending a request to: angels3k@me.com. Otherwise, here is a quick follow-up on the information regarding Hamilton's Blu-ray start-up collection.

Hamilton's Blu-ray circulation stats.⁶³

	Nov 09	Dec 09	Jan 10	Feb 10	Mar 10	Apr 10	Total	# units
Circs:	3,902	4,148	5,499	5,401	6,763	5,959	31,672	2,900

	Nov 10	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	Total	# units
Circs:	7,884	8,167	8,993	8,607	10,601	9,872	54,124	5,117

As one can see the collection's circs have remained incredibly strong, particularly considering that the 2010/11 collection has expanded to include non-fiction and television titles, both of which have longer lending periods which would skew the circ per unit statistic lower.

Prediction for Blu-ray

“Total consumer spending on entertainment [*this includes spending on industry-leading subscription TV and cable*] will move past \$500 billion worldwide by 2014, and packaged media still should account for roughly one-fifth of that...” according to research company Futuresource Consulting. “Packaged media still will continue to see year-over-year declines in the next few years, but even by 2014 the combined entertainment spending on online and mobile content won't match what DVD and Blu-ray Disc can bring in.”⁶⁴

Futuresource also predicts that Blu-ray sales revenue will finally pass DVD in 2012, and that by 2014 Blu-ray will lead with a 46% market share, DVD second at 26%, TV-based VOD third at 18%, and digital delivery (streaming plus EST) making up the remaining 15%.⁶⁵

Well, to quote Carl Sagan yet again: “Maybe.”

Superdisc

“Now that the game industry is moving in a digital direction with downloadable titles and cloud gaming services, some analysts argue that physical media is on its way out. Fear not, as companies are looking toward the next step in disc-based storage that could

⁶³ Provided with the kind permission of Michael Ciccone, Head of Collections, Hamilton Public Library

⁶⁴ Home Media Magazine: “Report: Blu-ray to Pass DVD in 2012” by Chris Tribbey, June 08 2011

⁶⁵ Ibid.

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make room for games with even bigger worlds and a larger polygon count that we could ever imagine.”⁶⁶

To quote Han Solo in the original 1977 Star Wars: “I don’t know, I can imagine a *lot*.”

HVD

For new readers or those of you who don’t remember this “sleeping giant” (it rarely makes the news), here is a quick refresher:

“(Holographic Versatile Disc) A high-capacity optical disc from the HVD Forum (www.hvd-forum.org) that combines single beam holographic storage and DVD technologies to provide cartridge capacities reaching 1TB and beyond. Formed in 2005 as the HVD Alliance, the first HVD standards were released in 2007 for 100GB read-only (ECMA-378) and 200GB recordable (ECMA-377) formats. HVD uses the conventional CD/DVD pit layer for addressing the disc, on top of which is the holographic recording layer. A red laser reads the addresses, while a green or blue laser reads and writes the holograms.”⁶⁷

We have been tracking Holographic Video Disc (HVD) in these reports since the first prototypes were announced in 2006. At the time, the prediction was that this format would eventually reach an information transfer rate of 1Gb/sec, with a storage capacity of 1 Tb (1000 Gb), a prodigious capability which would find its primary application as a back-up strategy for military and medical facility use. It’s great if you want your data to survive an EMP weapon attack, or a civilization-destroying solar flare, but when the format was first introduced it left consumer electronics executives scratching their heads, wondering what in the world to do with a technology which could store 200 standard definition movies on one disc, with players that cost about \$15,000 USD. I can just imagine the scene at the big box technology stores:

Customer: “How much is that one?” Sales rep: “\$15,000... plus tax.” Customer: “Uh... maybe I’ll stay with my Blu-ray player for now.”

Though tech writer Annette Gonzalez cheerfully advises us that “prices are expected to fall”⁶⁸, we are not keeping our eyes peeled for specials on holographic disc players and HVD media in the near future.

Next generation HVD technology.

Undaunted, the research and development teams of the various hardware manufacturers have just kept working, and steadily making these players and discs even more powerful. The Nextgen/Jump discs are now featuring storage capacities in the range of 6Tb: which is six thousand gigs (or 1200 DVDs, to keep it in perspective).

3D holographic technology

The next innovation, 3D optical data storage, “has the potential of giving users mass storage at the petabyte level.”⁶⁹

⁶⁶ GameInformer: “The Future of Physical Media” by Annette Gonzalez, October 05 2010

⁶⁷ <http://www.answers.com/topic/holographic-versatile-disc#ixzz1NwWPpYk4>

⁶⁸ Ibid.

⁶⁹ GameInformer: “The Future of Physical Media” by Annette Gonzalez, October 05 2010

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Just in case you've never heard of a petabyte, that's *1000 terabytes* (actually 1024, but who's going to nitpick), or a *million* gigabytes. To put it in terms that may be easier to assimilate, a petabyte of storage could handle well over *200,000* feature films in standard definition.

Again, there is no word yet on 3D holographic information transfer rates, but at the current industry standard (1 Gb/sec), it would take 11 *days* to completely write to a 3DH disc. "Hang on, Honey. I'm just backing up... uh... never mind." Even at Apple's Thunderbolt⁷⁰ information transfer levels (10Gb/sec) we're talking about over 24 hours to fully write an 3DH disc. But boy, think of what this is going to do for the gaming industry.

Gaming heaven

From a gaming perspective, this is a bonanza from every perspective. For the developers, any barriers created by storage restrictions have just been pushed back beyond the current horizon: no more developing with space restrictions as a factor; for the consumer, unbelievable hyper-realistic worlds; and for the studio, the security that comes with physical media (ask Sony how they much they're loving hosting global gaming now).

The future of physical media in the libraries

Now it's finally time to talk about what all this might mean for the future; specifically, the future of libraries in the latter part of this decade or early in the next. Obviously, any number of futures will present themselves, but three possibilities come immediately to mind:

1. Completely digital: no physical media at all (and maybe even no books) – the latter is considered highly unlikely in the first half of the 21st Century.
2. Primarily digital media, with a core reference collection of physical media: video discs (DVD, Blu-ray, HVD), music (whatever technology was in vogue when physical media finally bit the dust), Audiobook (the same), and print materials – possible later in this decade or in the next.
3. Hybrid: a comprehensive collection of everything available on digital in every category and format, and a strong well-represented collection of print materials and physical media, far above that which is available in the consumer marketplace.

Scenario 1: Libraries, like physical media, have vanished, transformed into virtual entities just like the materials they distribute. There are no more buildings. *Why would there be?* All libraries are contained in a single secure server in every national jurisdiction. In fact, it probably wouldn't even be necessary to house one such entity per country. One per continent would likely be enough.

Scenario 2: The physical presence of the library is much reduced and concentrated.

Scenario 3: Digital consists of at least 50% of the library's music and A/V catalogue, and ebooks are on an equal footing with print. The cinema is still going strong, bolstered by holographic 3D in the new circumferential movie theatres⁷¹. The major publishers produce print versions of only the top trade titles produced on special runs; similarly, the

⁷⁰ Apple's new ultra-fast technology

⁷¹ See "Surface-Plasmon Holography", page 62

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studios release only the major films on holographic 3D Blu-ray and HVD. The library strongly represents physical media in a world where the notion is quaint, but still extremely popular; as a result, library circulations are at levels never seen in the first decade-and-a-half of the 21st Century. The successful library vendors are hybrid animals which double as digital downloading and streaming specialists which also possess the capability to print limited book runs, independently duplicate media from masters and reproduce cover art, and deliver packaged media to the libraries. Vendors with these capabilities already exist.

Obviously, this is all speculation. Things are changing incredibly quickly and no one has a crystal ball. But anyone who takes even a quick glance at these three preceding possibilities would conclude that Scenario 3 is the best outcome for both librarians and the societies they serve. That being the case, it is also probably a good time to point out – as I have in previous reports and papers - that the future doesn't just happen, it's created by individuals. In other words, librarians will have a significant say in the future of libraries.

DIGITAL DELIVERY

Defining the terms “digital”, “digital delivery”, “digital distribution” et cetera

The term “digital” is of course a blanket term, no matter which way you define it, but depending on the source of a report, article, blog, post or whatever, it could mean any one of a number of different media combined in any one of a number of different ways, and it often does. The chief characteristic of the term “digital” as it is commonly applied to media is that it is delivered *online, via the Web*. Anything else is... something else. So, for the purposes of this whitepaper, we will rely on the following definition, courtesy of Wikipedia, to describe “digital” and “digital delivery” as follows:

“Online distribution, digital distribution, or electronic software distribution (ESD) is the practice of delivering content without the use of physical media, typically by downloading via the internet directly to a consumer's device. Online distribution bypasses conventional physical distribution media, such as paper or DVDs. The term online distribution is typically applied to freestanding products; downloadable add-ons for other products are more commonly known as downloadable content. Content distributed online may be streamed or downloaded. Streaming involves downloading and using content "on-demand" as it is needed. Meanwhile, fully downloading the content to a hard drive or other form of storage media allows for quick access in the future.”⁷²

A digital delivery mini-glossary

Based on the above, these are the standard terms the reader will encounter during this whitepaper. They are also in the glossary, but to prevent thumbing (print version) or toggling (digital version) back and forth, I'll just list them right here.

EST = electronic sell-through (buying and downloading content)

iVOD = internet video on demand (pay for a single streaming of content)

subs = subscriptions, in which the consumer purchases the right to stream a specific library of content (i.e. Netflix)

At any rate, that having been settled, we're going to start off this whitepaper with some information from *“The comScore U.S. Digital Year in Review 2010”*.⁷³

The comScore Digital Year in Review 2010

The number of Americans engaged in online video watching in December 2010 was up 32 percent from December 2009, with both increased content “consumption” and more video advertising streaming; in addition, American spent 12% more time watching online video in December 2010 than in December 2009, and streamed 8% more online titles.⁷⁴

There was “a continued increase in adoption of viewing original scripted TV content. While Hulu [*unavailable in Canada*] continues to drive a large portion of the online TV viewing activity, other major broadcast TV [*internet*] sites are playing an increasing role.”⁷⁵

⁷² Wikipedia redirects to this definition when the user enters the term “digital distribution”

⁷³ comScore: “U.S. Digital Year in Review 2010 – A Recap of the Year in Digital Media”, February 2011

⁷⁴ Ibid.

⁷⁵ Ibid.

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“The total combined time spent viewing online TV on Hulu and the five network sites grew 33 percent over the past year.”⁷⁶

Needless to say, this kind of performance is going to attract advertisers like flies. And in 2010 it did. But even though 16.4 percent of all videos streamed were ads, and even though online ads reached a staggering 7 out of 10 U.S. viewers in December 2010, those ads only represented a measly 1.6 percent of total viewing time. By comparison, conventional TV advertising comprises 25% of total TV viewing time. So in the digital streaming environment, ads “do not yet represent a significant interruption to the online viewing experience...”⁷⁷

It’s an old adage, but if you want to find out how some enterprise or other is doing, just follow the money. And the money is flowing to digital... which the gamers have already figured out.

Streaming Hurting TV, DVD⁷⁸

“The ongoing proliferation of digital platforms offering repurposed content streamed to PCs, portable media devices and televisions is negatively impacting disc sales, a Time Warner executive said.”⁷⁹

Warner wants the whole industry to “go digital”

Time Warner CFO John Martin “reiterated the company’s resolve to drive the entire entertainment industry digital.”⁸⁰ “He said creation of a cloud-based media storage system [*UltraViolet*] for consumer downloads and the rollout next year of premium VOD [*Martin probably means iVOD in this context*] represented steps designed to harness the potential of digital distribution while maintaining control.” And: “the home video business continues to undergo a massive transition from physical to digital – a shift he said Time Warner is seeking to exploit.” And also: “over time, digital will prove to offer more opportunities than risks, underscored by a shift from digital sell-through to rental.”⁸¹

““It’s not convenient (right now) to move from device to device,” Martin said.”⁸²

Electronic Sellthrough (EST) falls behind

Despite standing at 37% growth by September of 2010, EST collapsed in the last quarter and finished at 16% growth overall. “Notable in the decline is the fact that when Apple – the largest retailer of EST – re-launched Apple TV, it eliminated EST, opting instead for [*iVOD*] rentals.”⁸³

That alone should tell us everything we need to know. If a goliath like Apple has thrown EST under the bus, it’s a fairly safe bet that the studios’ hopes of replicating their physical sellthrough model online have been effectively dashed. But, being stubborn and

⁷⁶ comScore: “U.S. Digital Year in Review 2010 – A Recap of the Year in Digital Media”, February 2011.

⁷⁷ Ibid.

⁷⁸ Questex.com: “Time Warner Exec.: Streaming Hurting TV DVD” by Erik Gruenwedel, November 17 2010

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid.

⁸³ Questex.com: “Wither Digital Sell-Through?” by Erik Gruenwedel, January 11 2011

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loaded with the confidence generated by the sheer hubris of marketing one of the most popular offerings in human history, they haven't given up yet. "At CES last week [*Chief Tech Officer Mitch*] Singer told the media that cloud-based UltraViolet represented an opportunity for studios to have a "do-over" regarding EST."⁸⁴

But BTIG analyst Richard Greenfield disagreed bluntly. "The studios are simply trying to force something to occur that makes no sense for the consumer. In a digital world, rental has become so convenient there is simply no need to purchase content anymore."⁸⁵

Someone didn't get the memo

Blithely unaware of the consumer shift from purchase to rental, Canadian theatrical company Cineplex Entertainment launched "a digital storefront that allows consumers to download movies to a PC or store them in a digital locker. Streaming to connected TVs and other devices is not yet available."⁸⁶ The service "will offer movies in digital form... many months ahead of Netflix's Canadian streaming service," according to Ralph Schackart of William Blair & Co.⁸⁷ Cineplex won't be offering movies in digital form for long, however, not if it a) continues to ignore consumer trends and b) keeps on mentioning its competition in its *own* press releases. As it is, the service itself is still virtually invisible almost eight months after the announcement.⁸⁸

Consumer interest in EST is declining

Thanks to Richard Greenfield and other analysts, "evidence has emerged to show that consumer interest in actually owning digital media is on the decline as per the Q4."⁸⁹

(\$ in millions)	Q4		
	2010	2009	% Chg
Sell-Thru			
Physical			
- Standard Def DVD	\$2,947	\$3,508	-16.0%
- Blu ray DVD	\$800	\$516	55.1%
Total Physical	\$3,747	\$4,024	-6.9%
Electronic Sell-Thru	\$251	\$273	-8.2%
Total Sell-Thru	\$3,998	\$4,297	-7.0%
Rental			
Physical			
- DVD by Mail (Netflix)	\$585	\$444	31.8%
- Kiosk (Redbox & NCR)	\$498	\$260	91.3%
- Other (Blockbuster)	\$517	\$856	-39.5%
Total Physical	\$1,600	\$1,560	2.6%
Video-on-Demand / iVOD	\$600	\$488	23.1%
Total Rental	\$2,200	\$2,047	7.4%
Total Consumer Spending on Home Entertainment	\$6,198	\$6,345	-2.3%
Rental Share of Total Spending	64.5%	67.7%	
Box Office Q3 '10 vs. Box Office Q3 '09	\$2,278	\$2,379	-4.2%

Source: DEG, Box Office Mojo and BTIG Research estimates

⁸⁴ Questex.com: "Wither Digital Sell-Through?" by Erik Gruenwedel, January 11 2011

⁸⁵ Ibid.

⁸⁶ Questex.com: "Canadian Theater Chain Rolls Out Download Service" by Erik Gruenwedel, November 19 2010

⁸⁷ Ibid.

⁸⁸ See "Netflix:

⁸⁹ Gigaom: "UltraViolet's Real Challenge: People Don't Buy Movies Online" by Ryan Lawler, January 11 2011

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Cord cutters

“But perhaps most ominously, last summer the pay-television industry suffered an unprecedented net loss - for the first time – of customers, a yellow warning light that consumers no longer may regard cable TV as a must-have utility on par with electricity and phone service.” And further: “...recently released year-end data suggest entertainment companies are vulnerable to the same disruptive forces that imperiled the music and newspaper industries.”⁹⁰

“Cord cutters” is the television industry’s new term for the most dreaded of all consumer trends, when customers begin canceling their cable subscriptions in favour of an internet “sub” with a streaming company like Netflix.

“The studios and content companies have become increasingly aware of the problem, but they seem collectively paralyzed about what to do about it,” said Craig Moffat, an analyst with Sanford C. Bernstein & Co.”⁹¹

“You’re going to pay more for broadband”⁹²

There is currently a huge surge in Internet traffic as the cable cutters dominate the internet with video streaming. “With broadband suckers like Netflix and the new Skype iPhone one-to-one apps, do you honestly think telecommunication firms and broadband providers aren’t going to get wise?”⁹³ Meaning, the rumour is that rates are going to go up, at least in the U.S.

In Canada, we’re already getting hijacked by the ISPs.

Pirates come in many guises

“Late last month the Canadian Radio, Television and Telecommunications Commission [CRTC or CRTTC] approved initiatives by cable operators and telecommunication companies to charge subscribers extra when they exceed (download) more than select monthly data limits – typically from 20 gigabytes to 60 gigabytes. Data limits came about shortly after Netflix last summer launched a streaming-only service in Canada, which some critics believed could expedite so-called “cord cutting” by subscribers looking to downsize monthly bills with less-expensive, Web-based entertainment. Netflix CEO Reed Hastings, in a recent letter to shareholders, said the company is fighting excess charges domestic ISPs (notably Comcast) are imposing on it and/or content delivery networks (CDN) it works with, including Level 3 Communications.”⁹⁴

Netflix stated that it would challenge attempts by wired ISPs to move consumers to \$1 pay-per-gigabyte plans as opposed to the traditional capped plans. Hastings pointed out that it costs less than a cent to deliver a Gigabyte to a customer, and that the pay-per-gigabyte plan was grossly overpriced.⁹⁵ *[to say the least!]*

⁹⁰ Chattanooga Times Free Press: “New entertainment options besiege television, film” by Dawn Chmielewski and Meg James McClatchy Newspapers, January 30 2011

⁹¹ Ibid.

⁹² Reelso: “Online Video Predictions for 2011: Are You Ready For The Storm?” by Kevin Nalty, February 2011

⁹³ Ibid.

⁹⁴ Home Media Magazine: “Canada Anger Rises on Web Data Limits” by Erik Gruenwedel, February 01 2011

⁹⁵ Ibid.

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Things heat up

“Last week, public concern with Internet bandwidth caps hit a fever pitch as hundreds of thousands of Canadians signed petitions against [ISP] practices of “metering” Internet use.”⁹⁶

Metering is used to detect when a user has exceeded the predetermined provider limit on the amount of use by a particular account, and to bill that account extra for “overuse”. Evidently, Canada stands virtually alone with its ubiquity of caps; further, our cap rates are set lower than those of other countries by another order of magnitude. “For example, while U.S. giant Comcast has a 250 gigabyte per month cap, some Canadian providers have caps as small as 2 gigabytes per month.”⁹⁷ Further: “The extra cost has a real negative effect on the Canadian digital economy, harming innovation and keeping new business models out of the country. The widespread use of bandwidth caps in Canada is a function of a highly concentrated market where a handful of ISPs control so much of the market.”⁹⁸

“...it is crucial to address the potential for anti-competitive behavior.”⁹⁹

The CRTC finally gets involved

Konrad von Finckenstein, the Chairman of the Canadian Radio-Television and Telecommunications Commission (CRTC) recently mused about legislating video streaming companies, which have been hitherto exempt from several restrictions, including both the Canadian ownership rule and Canadian broadcasters’ mandate to include a fixed percentage of Canadian content.¹⁰⁰

“It’s something that’s moving very fast and I don’t want to deal with it when it’s too late... Maybe it is something that has to be done by legislation or whatever.”¹⁰¹

Redbox: still on the leash

As of mid-February 2011 Redbox still wasn’t in the digital delivery business, though it was already getting late in the digital day. Analysts had expected that the kiosk giant would have been all in by now, but executives explained that Redbox was still investigating prospective digital partners.

As Paul Davis, the CEO of Redbox’s parent company, Coinstar, said: “We could have moved a lot quicker a few months ago if we decided to do this on our own. We made a decision not to because the price was prohibitive.”¹⁰²

In other words, the huge costs of infrastructure and content licenses are beyond Coinstar/Redbox. The word at the time of the interview (February 17 2011) was that Redbox is looking to either Wal-Mart or Amazon, both monsters with deep pockets, to

⁹⁶ www.michaelgeist.ca: “The real reason we pay so much for Internet” by Michael Geist, February 06 2011

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Ibid.

¹⁰⁰ The Globe and Mail: “CRTC chief talks legislation for services such as Netflix”, by Marsha Lederman, June 14 2011

¹⁰¹ Ibid.

¹⁰² Paste Industry News: “Redbox to Offer Digital Service” by Nathan Spicer, February 17 2011

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back their entry into the new world of digital delivery. They may still be looking for a partner, but it is highly unlikely to be either of the two aforementioned. Both Wal-Mart and Amazon have since launched their *own* streaming services, and Redbox has yet to enter the market, either on its own or in conjunction with another company.

Now even Disney's getting on board

It's definitely some sort of sign, because whenever Disney moves to a format it is pretty well a given that that format is already well on its way to being established. It was Disney's belated move to DVD that finally secured the upstart format's place in the media pantheon in the late 90s. Disney's endorsement of Blu-ray was a huge victory in the Hi-Def format war. And in February 2011, with Disney's announcement of "a combined digital initiative", the virtual penny had finally dropped.

"In a day-long investor conference, Bob Chapek, president of distribution, unveiled Disney Studio All Access, a platform that combines Disney Movie rewards, Disney Movies Online, DisneyFile digital copy and Disney Key Chest – the latter being the studio's proprietary cloud-based digital locker initiative."¹⁰³

"Disney CEO Bob Iger said the media giant would continue to embrace technology..." and that "technological innovation had changed the "culture" of Disney..."¹⁰⁴

Bob Chapek said that: "...at the retail level, standalone Blu-ray, VOD and electronic sellthrough have not been enough to offset declines in DVD sales, which he said have dropped 21% since 2005."

Amazon sits down at the digital poker table with its big stack of chips...

On February 22 2011 Amazon formally launched *Prime Instant Video*, "a streaming service offering more than 5,000 TV shows and movies to annual subscribers."¹⁰⁵ The new service allows "Prime members free access to the content, which is playable on most Internet-connected devices, including Roku and TiVo. Annual membership is \$79, or \$1.35 per month less than Netflix's streaming service." And: "Other features of the service intended to upstage Netflix [*include the*] ability to share the service with up to three family members' video devices."¹⁰⁶

Analysts differ on Amazon's chances of success against Netflix.

"Given that Netflix has a significant amount of exclusive streaming content [*more than 11,500 titles*] and a wide lead in relationships and placements on CE devices... I think it will be tough for Amazon to do much... except fight for second place." – Eric Wold, analyst with Merriman Capital, New York.¹⁰⁷

¹⁰³ Home Media Magazine: "Disney Bows 'Studio All Access' Digital Initiative" by Erik Gruenwedel, February 17 2011

¹⁰⁴ Ibid.

¹⁰⁵ Home Media Magazine: "Amazon Launches 'Prime' Streaming Service" by Erik Gruenwedel, February 22 2011

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

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Others, including Ralph Schackart, point out that Amazon's smaller video library will not remain so for long: after all, 9 billion *in cash* buys a lot of movie licenses.¹⁰⁸

"The Diffusion Group found that 32% of respondents who are Netflix subscribers would sign up for Prime and cancel Netflix if the service was comparable."¹⁰⁹

Michael Greeson, partner at TDG, agrees. "Amazon is not Redbox, and the upside potential of this new streaming service will go far beyond this initial "Netflix Lite" offering [*of Amazon's*]."¹¹⁰

As an aside, Amazon's stock took a bit of a beating at the announcement of the Internet goliath's foray into the wonderful world of streaming, on fears that "Amazon might spend as much as \$250 million in expenses related to streaming rollout..."

I mean *really*; for Amazon, 250 million is chicken feed. After all, 9 billion minus 250 million equals... still almost 9 billion. They'll make it back in a week. This is just more proof positive that there is no collective entity on Earth more cowardly than a stock market.

Warner's new VOD service

Time Warner CEO Jeff Bewkes is regarded as one of the strongest advocates of digital distribution of all Hollywood executives. Under his stewardship, Time Warner "is taking a leadership role in launching a new premium VOD service in which consumers will be able to watch first-run movies weeks, maybe even days, after their theatrical release."¹¹¹

The only problem with this idea – that is, a single studio launching an online video store – is that 99% of moviewatchers don't give a darn who made which movie. They don't know, and they don't *want* to know. The studios, perhaps lost in hubris, have never seemed to grasp that what they sell is so powerful that they themselves fade away into nothing in the consciousness of their customers.

The case in point is one I brought up in the 2006 ETR; that is, that never in history did any person ever walk into a video store and say: "Where are your Warner Brothers films?"

No one has ever said that because 99% of movie watchers don't care which studio made what film, with the exception, perhaps, of Disney. Don't believe me? Take this quick reprise of the 2006 test:

Name the studio which made each of the following: *True Grit*, *Sanctum*, *Inception*, *Barney's Version*, and *Diary of a Wimpy Kid – Rodrick Rules*.¹¹² Now, if you know which studio made even two of those films without using the internet (or looking at the bottom

¹⁰⁸ Home Media Magazine: "Amazon Launches 'Prime' Streaming Service" by Erik Gruenwedel, February 22 2011

¹⁰⁹ Questex.com: "Survey: 32% of Netflix Subs Would Switch to Amazon Prime" by Erik Gruenwedel, February 25 2011

¹¹⁰ Ibid.

¹¹¹ Home Media Magazine: "High-Level Strategists" by Thomas K. Arnold, March 2011

¹¹² *True Grit* (Paramount), *Sanctum* (Universal), *Inception* (Warner Bros.), *Barney's Version* (Sony), and *Diary of a Wimpy Kid – Roderick Rules* (20th Century Fox)

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of this page), God help you: you're a bigger nerd than 99.999999% of the human race. The point is that an EST/streaming site featuring the titles of only one studio is going to be a frustrating visit – and thus a real turn-off - for pretty well most of the human race.

Warner and Facebook

On March 11th 2011, Warner announced plans to do an iVOD rental test of *The Dark Knight* on Facebook. In and of itself, this seems fairly innocuous, but looking beyond that tree at the huge forest behind it, well... “the idea that the studios would start selling and distributing their wares on the world’s biggest social network – indeed a socially-driven parallel internet – is game-changing”¹¹³ for several reasons. Facebook now boasts 650 million users. Recommendations will travel through the Facebook community with lightning speed, and Facebook third-party apps are on virtually every mobile and static device available.

And finally, if it works for Warner, the other studios will be there with their content in a flash. The word is that Sony is already considering it.¹¹⁴

The U.S. follows Canada on internet caps

“New York (AP) – AT&T is placing a limit on the amount of data its home Internet subscribers can transfer in a month (150 gigabytes) [*which is still huge by Canadian standards*]. AT&T portrayed Monday’s announcement as an attempt to curb “data hogs” but it could help the company preserve a revenue stream in the long run as people shift to Internet-based TV services.

“In practice, only frequent high-definition movie downloads, file sharing or perhaps constant video-conferencing can propel subscribers close to the limit.”¹¹⁵

There will be an extra charge of \$10 per 50 gigabytes for those who run over. That way AT&T can conceivably make up the revenue which is being lost as Netflix wins subs away from the cable giant.

Stay tuned on this one.

Digital distribution models proliferate

Let’s take stock of where we are at the end of the first quarter of 2011.¹¹⁶

We have two main formats: internet video-on-demand (iVOD), and EST (electronic sellthrough), and a plethora of digital delivery models¹¹⁷, as below:

- Hulu: free ad-supported TV and a sub model with more content
- Vudu (Wal-mart’s transactional iVOD service)
- Google TV and its YouTube division
- Netflix
- Amazon

¹¹³ Twitter: “Why Warner’s Movie Test on Facebook Is Such Serious Business” by Michael Learmonth, March 11 2011

¹¹⁴ Ibid.

¹¹⁵ Associated Press: “AT&T adds limit on downloads and charge for overages” by Peter Svensson, March 15 2011

¹¹⁶ Home Video Magazine: “Digital: the New Frontier” by Stephanie Prange, March 28 2011

¹¹⁷ Ibid.

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“We expect to see continued growth in nearly all home entertainment platforms, as consumers spend more dollars than ever on entertainment of all types – Blu-ray, EST, VOD, streaming, social games, apps and mobile: all of this comes at improved margins to the studios.” - Steve Beeks, President and co-COO of Lionsgate.¹¹⁸

Sony’s Crackle TV

A new iPhone app has become available for Crackle, Sony Pictures’ new digital entertainment network offering “quality movies and TV series from Columbia Pictures, Tri-Star, Screen Gems, Sony Pictures and more [*all properties of Sony*]. Crackle is available via web, mobile, gaming systems and set-top boxes.”¹¹⁹

An iPhone app is available, and a posted note says: “Thanks for your support. Crackle is the #1 Free Entertainment app on iTunes with over one million downloads in the first week!”¹²⁰

It’s free to download the app, and free to watch. On demand viewing is unlimited. The offering, as one might imagine, does not threaten to take your breath away. Feature films included are: “*A Few Good Men, Crouching Tiger, Hidden Dragon, Full Contact, Anaconda* and more, full-length, uncut and Free.”¹²¹

The TV offering includes full-length episodes from series including: *S.W.A.T., The Three Stooges, Sports Illustrated Swimsuit Specials, Charlie’s Angels* and [*shudder*] more.

Oh.... they also informed us that they fixed the GPS issue. It now turns off when it’s not being used (always a plus).

Broadband

There have been reader requests that we address the critical issue of a lack of internet service in certain under-serviced areas of this country. The request is timely. Michael Geist, holder of the Canada Research Chair in Internet and e-Commerce Law at the University of Ottawa, has very recently addressed this same issue in a strongly-worded challenge to the federal government.

“The CRTC issued its universal service decision this week, which included analysis of funding mechanisms for broadband access, broadband speed targets, and whether there should be a requirement to provide broadband access as part of any basic service objective.” And: “The CRTC declined to establish new funding mechanisms (relying on market forces) or changes to basic service and hit on a target of 5 Mbps¹²² (actual not advertised) to be universally available by the end of 2015. Critics argued this left consumers on their own and suggested that the targets were underwhelming [*to say the least*], particularly when contrasted with other countries.”¹²³

¹¹⁸ Home Video Magazine: “Digital: the New Frontier” by Stephanie Prange, March 28 2011

¹¹⁹ www.crackle.com

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² *by comparison, even now-lowly DVD is 10Mbps*

¹²³ www.michaelgeist.ca: “The Digital Challenge: 1500 Days to Universal, Competitive Broadband in Canada” by Michael Geist, May 06 2011

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2015? In the Age of Micronization, four years is an eternity. And 5 Mbps isn't going to thrill anyone, especially by then.

Geist goes on. "Universal access to globally competitive broadband... is perhaps the most important digital policy issue Canada faces and it should not be viewed through a narrow telecom regulatory lens. Rather, it is a government policy issue, one that requires a serious commitment by elected officials... the era of excuses are [is] over."¹²⁴

Then he throws down the gauntlet. The government should "set a realistic but ambitious target for broadband speed, pricing and competition that allows Canada to reverse a decade of decline and once again become a global leader."

Rotten Tomatoes... and a conflict of interest

Interestingly, on May 04 2011 Warner Bros. bought Flixter, a movie discovery site. Flixter is most famous for its oft-used subsidiary, the famous "Rotten Tomatoes."

So now, Warner Bros. effectively owns Rotten Tomatoes. In the introduction to his interview with Warner and Flixter executives, the prolific Erik Gruenwedel described Warner's acquisition as "the studio's shrewd effort to promote digital sellthrough by targeting the sites' savvy unique-user base of 25 million."¹²⁵

Now, as overly-solicitous as that description may be, Mr. Gruenwedel did have the fortitude to ask the obvious question of Flixter co-founder Joe Greenstein: "Can Flixter/Rotten Tomatoes retain its ratings independence after being bought by a studio?"

In essence, Mr. Greenstein's answer was to point out that Rotten Tomatoes was previously owned by a studio [*sorry Joe, but IGN Entertainment is not the same thing as Warner*]: "We have a strong commitment from everybody at Warner Bros. and a strong understanding that this cannot be successful if it is not independent."

Not to question anyone's integrity, but how long do you think Rotten Tomatoes' treasured independence is going to last? If I was looking for a new start-up, it might be a Rotten Tomatoes knock-off that is *not* owned by someone with a clear-cut conflict of interest.

A united front still eludes the studios

In an interview with Home Media Magazine, Thomas Gewecke (president of Warner Bros. distribution) had a lot to say about the studio's strategy as we enter the digital age.

"Warner also intends to use the [*their*] properties to help launch a cloud-based consumer app, dubbed "digital everywhere." The app would work in unison with pending industry effort UltraViolet, allowing consumers to purchase packaged media and access a digital copy to any compatible media device."¹²⁶

¹²⁴ www.michaelgeist.ca: "The Digital Challenge: 1500 Days to Universal, Competitive Broadband in Canada" by Michael Geist, May 06 2011

¹²⁵ Home Media Magazine: "Six Questions: Thomas Gewecke, President of Warner Bros. Distribution, and Flixter Co-founder Joe Greenstein" by Erik Gruenwedel, May 06 2011

¹²⁶ Ibid.

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Yes, we all know that there's going to be a digital locker, Ultraviolet, where the user can store all their digital movie properties, regardless of studio of origin. Except that Disney is officially not on board, and neither is Apple (which is obviously not a studio, but it means that you can't store any of the EST items you've purchased through them on UltraViolet). But to the point: Warner is building its own digital locker which, from the sounds of it, does *exactly the same thing as UltraViolet? Why?* And Sony has built its own streaming site, following the same rank-breaking route.

At least Joe Greenstein partly gets it... but only partly: "What people want now is a modern Web app, touch, visual display with personalized and social recommendations. And they want it on their TV, their tablet, their smart phone and everywhere they go. That's the promise of what EST in a digitally connected world should be."¹²⁷

But Joe, they don't *want* EST. And they don't *want* every movie look-up to turn into a scavenger hunt. So, to reiterate:

1. The majority of users want to stream movies on a pay-per-view basis, or even better, subscribe to a streaming service.
2. Since they don't know or care which studio made what movie, they do not want to have to search as many as seven different studio-owned sites when they're looking for that movie. They want the online equivalent of the classic video store.

In other words, they want Netflix, or Amazon, or now... Google.

Google (thinly disguised as YouTube) wades into the streaming pool

"YouTube announced May 9 that it will now offer more than 3,000 additional films from three major studios for rent, with some titles reportedly available the same day as the DVD offering. The Google-based video service recently signed deals with Time Warner Inc.'s Warner Bros, Sony Corp's Sony Pictures and Comcast Corp's Universal Pictures, in addition to its previously announced partner Lions Gate Entertainment."¹²⁸

"New Releases titles... are available for \$3.99 each, while catalogue titles are available for \$2.99. Renters have 24 hours to finish their rental, and 30 days to begin watching the film, Some older titles are available for free, supported by advertising."¹²⁹

So that's it. The biggest of the giants, armed with four studios, is now in the game.

Oh yes, and the movie pages are advertised as being supported by Rotten Tomatoes. Ought to be interesting to follow those Warner reviews...

Optimism taken to a whole new level

Meanwhile, back in Canada again, zip.ca (a.k.a. Netflix Junior) "has partnered with Samsung electronics Canada to create an app that will allow members to stream movies

¹²⁷ Home Media Magazine: "Six Questions: Thomas Gewecke, President of Warner Bros. Distribution, and Flixter Co-founder Joe Greenstein" by Erik Gruenwedel, May 06 2011

¹²⁸ NTCA: "YouTube to Add 3,000 Movies for Rent" by Jesse Ward, May 13 2011

¹²⁹ Home Media Magazine: "YouTube to Add 3,000 Movies for Rent" by Chris Tribbey, May 09 2011

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and TV shows to connected Samsung TVs, Blu-ray Disc players and home theater products.”¹³⁰

In my opinion the folks at zip.ca should win the award for “most optimistic beings in the universe”.

Granted, being Canadian, and coming in with an impressive 72,000 titles and a \$5.95 subscription base price point is a solid place to start in this country, but the Samsung partnership? It doesn’t make sense. Let’s say I’m looking to subscribe with a service: zip.ca makes sense initially, big catalogue, Canadian owned and operated just in case the CRTC ever wakes up and starts regulating digital streamers... but *only if I own a Samsung TV, Blu-ray player, or “other” unspecified home theatre product.*

In other words, they have the offering but they can’t access the entire market; in fact, they can’t come close to accessing the entire market.

But even if zip.ca *could* access the entire panorama of devices, their competition is a cast of titans: Google, Amazon, all the studios, and most dangerous of all, Netflix. Like I said, the Netflix braintrust understands mindshare as well as any organization in the world. I was channel surfing recently and on three separate click-click-click channel changes I saw Netflix ads, one after the other... *three in a row.* And when one pauses to think about it, *these are advertisements on a competitor’s product* (like Google running banner ads on Bling).

But the folks at Amazon and Google know a thing or two about mindshare too, and they come with gobs of cash. Oh and this literally just in: Apple is coming into the marketplace as well, with 5 billion in cash *for development alone.* Now, it *is* possible that none of these monsters are better than zip.ca (though that seems unlikely), but the bottom line is that none of them have to be better than zip.ca if *no one knows the zip.ca service exists.*

Apple’s iCloud Offering

“Apple Inc. appears to be arming itself for a full-on assault on the \$150-billion-plus world of multimedia content and distribution.”¹³¹

“Apple’s edge comes down to its record of striking deals for key content, most clearly seen in digital music service iTunes.” And: “Apple is estimated to be spending up to 5 percent – or over \$5 billion – of its expected annual revenue this year on capital investments, most notably in a North Carolina data centre that will dwarf its current one.”¹³²

““The future is... you want to be able to shift your content between all your screens and be able to do that pretty easily and seamlessly,” said Peter Misek, Jeffries & Co. analyst...”¹³³

¹³⁰ Home Media Magazine: “Canadian Rental Service, Samsung Working on Streaming Service” by Erik Gruenwedel, May 12 2011

¹³¹ Reuters: “Apple Marshalling for Internet Content War” by Poornima Gupta, May 12 2011

¹³² Ibid.

¹³³ Ibid.

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It is expected to be a cloud-based streaming subscription service, run from its new 500,000 sq. ft. data centre in North Carolina. This makes sense, as “entrenched companies [are] being challenged by upstarts like Netflix using cloud capabilities to stream content across devices.”¹³⁴

Sure enough, it was. Apple launched cloud-based streaming initiative *iCloud* on June 06 2011.¹³⁵

Apple CEO Steve Jobs said: “Today it is a real hassle and very frustrating to keep all your information and content up-to-date across all your devices. iCloud keeps your important information and content up to date across all your devices. All of this happens automatically and wirelessly, and because it's integrated into our apps you don't even need to think about it – it all just works.”

Audiovisual digital delivery and the libraries

So finally, we come to it: what place will libraries have in this new world of digital delivery?

Again, there are no crystal balls, but I think the most likely future, one which will begin to take shape as we reach the median point of this decade, is that libraries will develop hybrid collections that feature new release digitally delivered materials in combination with strong, well-represented collections of physical materials – far more extensive than the limited physical media offerings which will still be available to the public. These physical materials will be provided by a new breed of vendor that will have the capacity to do limited print runs on demand, and duplicate on demand popular adult and children's theatrical releases from all studios, children's television series and stories-from-books shorts, a full complement of relevant non-fiction video materials, audiobooks in CD format, and music CDs and DVDs.

That, in my opinion, is how it will probably play out. But as I have said previously, the future doesn't just happen, it's *made*. And libraries would be wise to remember that it is within their power to shape the future of these venerable and most valuable institutions, to ensure that they don't just survive, but thrive, as the digital age continues to unfold.

¹³⁴ Reuters: “Apple Marshalling for Internet Content War” by Poornima Gupta, May 12 2011

¹³⁵ TechSmart: “Apple Introduces iCloud Offering” by Johan Keyter, June 07 2011.

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Ebook

In light of the current lack of a standard spelling for the term “ebook”, “ebook” is how it shall be spelled (mostly, anyway) for the purposes of this whitepaper.

Publishing in the digital era

“The publishing industry seems unlikely to suffer the same jolting upheaval as the music industry experienced when new technologies hit it. Several factors suggest a fairly smooth evolution toward the digital age, including most readers’ continuing attachment to paper, the complementary nature of ebooks and paper, and limited electronic privacy, at least to date.”¹³⁶

Yes, but there’s that problem of exponential sales growth, which has already exceeded all predictions by an order of magnitude.

Newspapers and magazines

My morning Globe and Mail is getting thinner, and thinner, and thinner...

“... the newspaper and magazine industries continue to grapple with broader challenges... most online press readers want to continue to get information for free... they will pay only for premium content – such as financial information, local news and deep analysis. Digital reading devices are thus an additional distribution channel for an industry that still needs to redesign its business model.

“Expanding from the traditional role of news providers, they are now focusing on investigative journalism, editorials and opinion, and debate moderation...”¹³⁷

Google’s Industrial Age Robber-Baron Business Strategy

“Google Inc. launched a service to make it easy for publishers to sell digital versions of newspapers and magazines, undercutting a similar plan launched by Apple Inc., as both tech titans battle to dominate smartphones and tablet computers.”¹³⁸

“Google is letting publishers keep about 90 percent of subscription revenue gained through One Pass [*the new subscription service*], a direct shot at Apple, which lets media companies collect only 70 percent of subscription revenue from applications downloaded through iTunes.

““Our intention is to make no money on it,” said Google Chief Executive Eric Schmidt at an event in Berlin. “We want the publishers to make all the money.””¹³⁹

Actually, it would appear that Google’s real intention is to make sure that *Apple* makes no money on it... that is, until Apple goes away. And then... well, let’s just say we aren’t going to erect a monument to Google beside Albert Schweitzer’s statue just yet.

¹³⁶ Bain & Company, Inc.: “Publishing in the Digital Era” by Patrick Behar, Laurent Colombani, and Sophie Krishnan, copyright 2011

¹³⁷ Ibid.

¹³⁸ Reuters – San Francisco: “Google starts digital subscription service”, February 16 2011

¹³⁹ Ibid.

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Newspapers dying a slow death

Newspapers are gradually vanishing, because their readers are "...choosing digital content rather than traditional ink on paper."¹⁴⁰ Ironically, most of that digital content is coming from online versions of themselves.

"The industry has literally been decimated: roughly one in ten developed world publishers from 2006 isn't even around anymore."¹⁴¹

E-readers

"...the emergence of new reading devices suggests an interesting evolution in writing itself... long-term value will not come from simply reformatting print content into digital... *[the]* greatest opportunity lies in experimenting with such new formats as nonlinear, hybrid, interactive and social content..."¹⁴²

"Dedicated e-readers and multipurpose tablets are finally becoming commonplace... adoption rates are projected to reach 15 percent to 20 percent of the population in developed countries *[and]* could reach higher levels if multi-purpose tablets continue on their current trajectory."¹⁴³

Well, if this represents any portent of the future, Apple – unsolicited - downloaded a free e-reader app to my iPad the day after I registered the device.

Based on mid-2011 sales figures, ebook will almost certainly reach higher levels, and sooner than anyone predicted at the beginning of the year.

Who reads ebooks?

The Bain study found that "early adopters of digital reading devices and multipurpose tablets mostly are already heavy readers" and "more often men than women... more affluent than average and tend to be in the 20s and 30s."¹⁴⁴

"The second wave of digital migration should broaden the e-readers' market." Those who "told us they are considering purchasing digital devices in the near future are mostly women and are older than 35 years of age."¹⁴⁵

"...respondents who have adopted digital formats say they continue to read printed books. This attachment also holds for younger generations."¹⁴⁶

My personal experience backs up this last statement. I offered to buy my daughter Alexandra, a voracious reader, an e-reader for her 9th birthday; to my surprise, she declined with thanks, explaining: "I just like books better."¹⁴⁷

¹⁴⁰ The Globe and Mail: "Publishers of digital content face uphill battle" by Duncan Stewart, February 24 2011

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ Bain & Company, Inc.: "Publishing in the Digital Era" by Patrick Behar, Laurent Colombani, and Sophie Krishnan, copyright 2011

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

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Ebook market timetable

“Adoption rates show that the appetite for digital books has been strong, even by the standards of the media industry. Today ebooks account for approximately 5 percent of books sold in advance markets like the United States. These rates are expected to quadruple, or even quintuple, over just five years, meaning the industry has little time to prepare... the transition will be rapid and could trigger two positive trends.”¹⁴⁸

1. “The shift to digital publishing could *boost book consumption*.” This is something I have personally borne witness to; as well, librarians and other contacts have reported the same phenomenon. Ebook consumers read more; as well, people who seldom or never read become readers when they acquire an e-reader.
2. Consumers who use e-readers are *more like to pay for what they read* (almost 70% non-pirated); by comparison, people who read ebooks on computer are not as likely to pay.

Literary categories evolve differently into ebook

“...distinct adoption rate and business models will impact fiction and nonfiction works, guidebooks, illustrated books, children’s literature or information”¹⁴⁹ accordingly.

What is the predicted impact on the book industry?

“The book industry will not benefit economically from a migration to digital formats without a fundamental evolution that entails a redistribution of value across all participants, including retailers, distributors, publishers and even authors.”¹⁵⁰

“Digital formats will represent approximately 25% of industry profits in the medium to long term.”¹⁵¹

Select players are predominant: Amazon, with Kindle; Apple, with iTunes; and now Google is entering the market.

“Obviously, digital distribution will have an economic impact on traditional publishers, whose business models are based on economies of scale and will therefore suffer from a decrease in physical volumes.”¹⁵²

“...the digitization of 20 to 30 percent of today’s printed volumes challenges the very nature of current physical distribution networks.”¹⁵³

“...new technologies could loosen the control that publishers have over the entire value chain... publishers must not only redeploy resources to digital channels, but also create new services for authors and readers alike.”¹⁵⁴

¹⁴⁸ Bain & Company, Inc.: “Publishing in the Digital Era” by Patrick Behar, Laurent Colombani, and Sophie Krishnan, copyright 2011

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

¹⁵¹ Ibid.

¹⁵² Ibid.

¹⁵³ Ibid.

¹⁵⁴ Ibid.

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Authors will benefit from digital

“A number of authors have already unbundled the physical and digital rights of their works to increase their negotiation power.”¹⁵⁵

Innovations directly related to ebooks

Hybrid: adds a set of high-definition visuals to the reading experience. ScrollMotion and Sesame Street created children’s ebooks that enhanced the text with audio tracks. Random House has developed applications that mix text, music, and narration.

Nonlinear: websites such as Memorandum use algorithms to compile professional articles and political blogs. Questions arise about the selection criteria and quality of the information.

Interactive: The Amanda project actively involves the readers in writing a collaborative script.

Social: whereby authors can communicate directly with their audience, and readers with each other. Authonomy.com, operated by HarperCollins. Hopeful authors create their own webpage and upload their manuscript for all visitors to see. Shelfari.com owned by Amazon brings together a community of readers who share their favourite books through a virtual library, like Hachette Livre’s “MyBoox”.¹⁵⁶

Amazon scanning app (things are getting ugly)

“Amazon on Tuesday released an update to its iPhone app that supports barcode scanning. Version 1.2.8 adds the ability to scan a barcode, and have the app look up the item in the Amazon catalog. The option currently only works on the iPhone 4 and iPhone 3GS running iOS 4 or higher; the full app also works on the iPod touch and iPad.”¹⁵⁷

You don’t have to think very hard to figure out what this application is for. Go to a bricks and mortar bookstore, scan the barcode on the book you want, the app looks it up on Amazon, and you order either the physical copy or download – right then and there – to your kindle. It’s not illegal, just completely unethical; in fact, the depth of sleaze is breathtaking. And the icing on the cake is that *this app wasn’t even Amazon’s idea*. They got it from someone else.

Torrent-Droid revisited

2009 the Androidandme website offered a bounty to the first developer who could create software that could use a cellphone camera to scan a “retail DVD UPC barcode”, use the image to identify the item on a database, connect to a BitTorrent search engine, identify the matching torrent, and wait for the user to hit “start”. The winner would be the first developer to come up with the software.

¹⁵⁵ Bain & Company, Inc.: “Publishing in the Digital Era” by Patrick Behar, Laurent Colombani, and Sophie Krishnan, copyright 2011

¹⁵⁶ Ibid.

¹⁵⁷ Pcmag.com: “Amazon iPhone App Adds Barcode Scanner” by Chloe Albanesius, October 13 2010

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Well, a guy named Alec Holmes won the bounty, which was – wait for it - 90 dollars (USD).¹⁵⁸

OverDrive gets an injection of equity

Ebook and media platform vendor OverDrive announced today that it had received a "major investment" from Insight Venture Partners, a private-equity firm that focuses on technology companies... No specifics were provided regarding the amount of the investment, or what the investment capital will be used for in the near term."¹⁵⁹

But we can guess. Given the potential competitors that are only now turning their eyes on the exploding library ebook market, Overdrive is going to need cash to swiftly upgrade its wonky interface and pay for expensive new licenses.

"We are big believers in the future of digital books and e-reading for library patrons, students and consumers," Insight's Peter Sobiloff said in the same release. "We look forward to leveraging Insight's capital and network to help accelerate Overdrive's growth and expand its portfolio of solutions."¹⁶⁰

Google Books

"Google has launched its long-awaited e-bookstore, Google E-books, bringing more than 3 million books — many of them free — to any device with a web browser in the U.S. The initiative... offers an alternative sales model... Instead of purchasing e-books through a single online store to read only on compatible software, Google lets consumers buy books either from its store or any other online vendor that sells books in EPUB and PDF formats, and read them on any device with a web browser.

"This allows independent booksellers with loyal customer bases to advertise and sell Google e-books via their own venues and take an (as of yet undisclosed) cut of the revenue, an opportunity previously denied to them. It also allows consumers to choose whom to purchase their books from on Google's platform, just as consumers can choose between third-party sellers on Amazon. Google E-books is also launching with an affiliates program in place.

"In addition to a Google Web Reader application, users will be able to read Google e-books on apps for Android, iPhone and iPad devices. Reading content will automatically sync across devices, so if you begin reading in the morning in the iPad, you'll be able to pick up where you left off on your iPhone or Android device on the subway, and again on your office computer during your lunch break.

"Nearly 4,000 publishers will be providing content through Google E-books at launch, including all of the major players: Random House, Macmillan, Simon & Schuster, Hachette, etc."¹⁶¹

"On the retail side, what the Google E-Bookstore provides readers isn't really all that different from the offerings of Amazon, Apple, and Barnes & Noble. But what Google has

¹⁵⁸ CVS Midwest: "The 2009 Emergent Technologies Report" by Douglas Atkinson

¹⁵⁹ Library Journal: "OverDrive Gets "Major Investment" from Private Equity Firm" by David Rapp, October 18 2010

¹⁶⁰ Ibid.

¹⁶¹ Mashable: "Google Launches Long-Awaited E-Bookstore" by Lauren Indvik, December 06 2010

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created is more than just an ebook outlet. Google Ebooks is actually a distribution platform for digital books that is device-independent and open to resellers and small publishers.”¹⁶²

Kobo vs. the world

“...Canadians are playing a big part – both as customers and players – in the ebook revolution that has upended sales of traditional books and is expected to vault past the \$1 billion in sales it achieved in North America last year.”¹⁶³

The Globe and Mail provided no specific metrics as to Kobo’s market share on that date, or projections for 2011, only that it was “the best-selling gift at the bricks-and-mortar bookstores of the device’s corporate parent, Indigo Books and Music...”¹⁶⁴

There was some mention of the launch of the new Google E-Bookstore in the article, which was dismissed as having not brought anything new “to the party”, and that “Customers around the world can already access millions of books, newspapers and magazines on Kobo.”¹⁶⁵

“... the Kobo service has been “device agnostic”¹⁶⁶ since its inception,”¹⁶⁷ Kobo CEO Michael Serbinis said.

OverDrive and Random House

“OverDrive... announced today that it had reached an agreement with Random House of Canada to provide Canadian libraries access to thousands of new ebook titles from Random and other Random-owned Canadian publishers, including McClelland & Stewart.”¹⁶⁸

“OverDrive currently supplies about 350,000 ebooks, Audiobooks, and other digital materials to some 2000 Canadian libraries.”¹⁶⁹

I must confess to being a tad skeptical of the “2000 Canadian libraries” figure (unless Mr. Kelley is using a broader definition of the term “Canadian library”). Regardless, at least now we know where some of OverDrive’s Insight investment money went.

Tablets will rule

As for Google steamrolling Apple in this field of endeavour, Duncan Stewart of the Globe is unconvinced. “Publishers I have talked to believe the tablet is likely to be the dominant device for reading digital content, and Apple has a very big early lead. That installed base of tablets, the iTunes store and the more than 100 million credit cards

¹⁶² Campus Technology: “Google Enters the E-Book Fray. What Does it Mean?” by John K. Waters, February 28 2011

¹⁶³ The Globe and Mail: “Kobo is keeping Canada in the vanguard of the ebook revolution – for now” by John Barber, December 07 2010

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

¹⁶⁶ I really loathe that technomorphic buzz-phrase “device agnostic”.

¹⁶⁷ Ibid.

¹⁶⁸ Library Journal: “OverDrive Deal expands Canadian Library Ebook Selection” by David Rapp, February 02 2011

¹⁶⁹ Ibid.

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already signed in makes it a market that will be too big for many to ignore... even as they complain about the economics."¹⁷⁰

OverDrive goes iPad.

"This week [*OverDrive*] released its optimized iPad app, allowing iPad users to borrow and read ebooks at full size (and listen to audiobooks) from more than 13,000 libraries around the world... the new app supports EPUB and MP3 audiobooks. It also allows wireless borrowing..."¹⁷¹

The app has garnered generally positive reviews, except from at least one digital content provider: Laura Dawson of Firebrand Technologies: "OverDrive just released an iPad app for library ebooks. Game over."¹⁷²

And: "With OverDrive's app, the price of ebooks just became zero."¹⁷³

Asked by Library Journal what she meant by the remark, Dawson emailed: "I just think that because OverDrive has made this app available for the iPad (and given the popularity of the iPad), it means that a WHOLE lot more people will be downloading library books." And that: "...it does elevate the role of libraries in the digital environment..."¹⁷⁴

Borders finally folds

If there was ever a testament to the growing power of the ebook, this is it. Eerily, in a scenario almost identical to the fall of Blockbuster: "Borders Group Inc. filed for bankruptcy protection and said it would close about one-third of its bookstores. The long-expected Chapter 11 filing will give the second-largest U.S. bookstore chain a chance to try to fix its finances and overhaul its business in an attempt to survive the growing popularity of online book buying and digital formats. But the chain still faces questions about its longer term survival, in the face of competition from larger rival Barnes & Noble Inc., discounters such as Wal-Mart Stores Inc and Costco Wholesale Corp., as well as web retailer Amazon.com and Apple Inc in electronic books. Borders President Mike Edward said his chain "does not have the capital resources it needs to be a viable competitor." He said the bankruptcy was essential to restructure its debt and still operate."¹⁷⁵

HarperCollins and the circ cap issue

"In the first significant revision to lending terms for ebook circulation, HarperCollins has announced that new titles licensed from library ebook vendors will be able to circulate only 26 times before the license expires."¹⁷⁶ ...and enraged just about every librarian in North America.

¹⁷⁰ Library Journal: "OverDrive Deal expands Canadian Library Ebook Selection" by David Rapp, February 02 2011

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

¹⁷⁵ msnbc.com: "Borders files for bankruptcy, to close 200 stores" Reuters, February 16 2011

¹⁷⁶ Library Journal: "HarperCollins Puts 26 Loan Cap on Ebook Circulations" by Josh Hadro, February 25 2011

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OverDrive also threw some gasoline on the fire by saying that publishers “seek to ensure that sufficient copies of their content are being licensed to service demand of the library’s service area, while at the same time balance the interest of publisher’s retail partners who are focused on unit sales.”¹⁷⁷

When libraries responded with fury, HarperCollins stood unmoved, though Josh Marwell, HarperCollins’ President of Sales, did send them a nice polite letter saying how his company is “committed to libraries and recognizes that they are a crucial part of our local communities”¹⁷⁸ etc.. He then goes on to describe their concerns as follows:

“Our prior e-book policy for libraries dates back almost 10 years to a time when the number of e-readers was too small to measure. It is projected that the installed base of e-reading devices domestically will reach nearly 40 million this year. We have serious concerns that our previous e-book policy, selling e-books to libraries in perpetuity, if left unchanged, would undermine the emerging e-book eco-system, hurt the growing e-book channel, place additional pressure on physical bookstores, and in the end lead to a decrease in book sales and royalties paid to authors...”¹⁷⁹

Now, from an outsider’s point of view, to limit the number of circulations to something less than *infinity* does not seem *entirely* unreasonable. And while 26 circs may also be unreasonable, it stands to reason that there must be an actual number of circulations which would be acceptable to both parties. And achieving a solution to this apparent impasse might provide a template for finally bringing two major publishers – who do no ebook business with libraries at all – on board.

“While HarperCollins is the first major publisher to amend the terms of loan for its titles, two other members of the publishing “big six” – Macmillan and Simon & Schuster – still do not allow ebooks to be circulated in libraries, much to the consternation of librarians.”¹⁸⁰

More on that at the end of this whitepaper; in the meantime, a number of libraries have already begun a boycott of HarperCollins, and there’s even a petition going around.

Petition against HarperCollins

“A 23-day-old petition against HarperCollins’ decision to cap ebook circulations at 26 has caught fire in the last few days, rising from a few thousand signatures to 58,452 as of Thursday (May 05 2011) morning. The petition was launched by Andy Woodworth, an adult services librarian at Bordentown Library in New Jersey.”¹⁸¹

The Colorado model

An interesting new collaboration “among the Colorado Independent Publishers Association (CIPA), Douglas County Libraries, and Red Rocks Community College Library will allow the libraries to buy, store and manage access to ebooks on library

¹⁷⁷ Library Journal: “HarperCollins Puts 26 Loan Cap on Ebook Circulations” by Josh Hadro, February 25 2011

¹⁷⁸ HarperCollins Open Letter to Librarians, March 01 2011

¹⁷⁹ Ibid.

¹⁸⁰ Library Journal: “Petition Protesting HarperCollins Ebook circulation Policy Takes Off” by Michael Kelley, May 05 2011

¹⁸¹ Ibid.

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servers; integrate the ebooks into their catalogs; and provide click-through purchases of the titles from the library catalog...¹⁸²

“On the back end, The Adobe Content Server can access ebook content stored within itself, and on its front end, it can connect... to a library’s online catalogue to enable lending... and the libraries can attach DRM so that the circulation period will expire at the end of whatever date they set.”¹⁸³

“Under the new partnership, which is scheduled to be up and running by June, the libraries will purchase every copy they circulate and limit use to a maximum of three weeks and to one user at a time for each copy purchased (e.g. three purchases would permit three simultaneous users). CIPA is trusting the libraries to manage access to the file, not reproduce it capriciously, and guard against piracy.”¹⁸⁴

The ebook storm surge is approaching

As everyone who is involved is keenly aware, the sales growth of ebooks is explosive. Sales in January 2011 as compared to January 2010 show a 115% increase: from 32.4 million in January of last year to 69.9 million this past January, while the sales of paperbacks were down a full 30% compared to last January.

Get ready for the storm surge, and the resulting strain on both library and vendor/supplier infrastructure.

Kansas versus OverDrive

Shocked by sudden huge price increases in contract renewal proposals from OverDrive which - according to the state – amortized out over the next 3 years would result in a 700% increase, negotiations between the library digital vendor and the Kansas State Library have ground to a halt.

This has many Kansas librarians feeling very anxious about losing access to all their ebook content if the state fails to come to an agreement with the library’s digital delivery provider, even though “the current contract... appears to oblige OverDrive to transfer content to another service provider if the contract is terminated, though it is unclear what that would entail.”¹⁸⁵

This situation highlights a very real and growing concern about content ownership in the digital era, one that is rapidly becoming central as libraries struggle to adapt to the new formats.

“OverDrive said the higher fee for the larger libraries in the state would help defray the costs of “product development,” according to Donna Lauffer, the county librarian for the 13-branch Johnson County Library in Overland Park.”¹⁸⁶

¹⁸² Library Journal: “Petition Protesting HarperCollins Ebook circulation Policy Takes Off” by Michael Kelley, May 05 2011

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ “Library Journal: Kansas State Librarian Goes Eyeball to Eyeball with Overdrive in Contract Talks” by Michael Kelley, April 06 2011

¹⁸⁶ Ibid.

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Lauffer told Library Journal that “The Overdrive product is difficult to use and so we spend a lot of time explaining how to use it. And there isn’t really a competitor to OverDrive... So, now we’re being asked by OverDrive to contribute money to help develop their products as well as to buy the content. We expect them to develop their product. They should have been developing their product all along.”¹⁸⁷

But it is the possibility of losing access that has the librarians most worried. “The question of access may pivot around clause 11.4 of the current contract, which has been excised from the renewal proposals, [Director Jo] Budler said. The clause, Budler believes, obliges OverDrive to cooperate in the transfer of content to another service provider in the event that the contract is terminated.”¹⁸⁸

“We noted that they have tried to pull this clause, and we will be looking more deeply into that,” she said.¹⁸⁹

For their part, OverDrive has again pointed out – as did HarperCollins – that the entire digital business is in a state of massive transition upwards, and the load on both librarians and their service companies is increasing exponentially.

OverDrive spokesperson Dan Stasiewski said that OverDrive’s “overall national checkout number for 2011 was rapidly approaching the total checkouts for 2010. “We are at one checkout *per second*, which is something we haven’t seen before.”¹⁹⁰

Cry me a river.

Ebook is wide-open to piracy without legislation to prevent it

“Mike Essex of Impact Media points out that: “...ebooks, for now, are largely unregulated (i.e. no copyright detectors), so repurposing content and slapping together a book can be done for next to nothing. The low barriers to entry and quick turnaround time (24 hours) also helps ensure that a book can be put together and sold quietly without a reader ever knowing where the content came from.”¹⁹¹

“Is it unethical? [*try fraudulent*] Depends on which camp you’re coming from [*no it doesn’t*], but bottom-line profit drivers are hardly in the business of rosary clutching [*fraud is not business, it’s fraud*]. And if content farmers are to become content pirates they’d need to act quickly, before laws that more cohesively regulate the ebook industry become cemented, and eventually, enforced.”¹⁹²

Mr. Essex’s grasp of ethical absolutes may be a bit fuzzy, but he does table an excellent suggestion.

“...plagiarism detectors comparing ebook content with the rest of the web will be needed (which I’m sure the braintrust at Google can put together in half a day; they’ve done it

¹⁸⁷ “Library Journal: Kansas State Librarian Goes Eyeball to Eyeball with Overdrive in Contract Talks” by Michael Kelley, April 06 2011

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

¹⁹¹ Techland: “Dying Content Farms May Turn to Ebooks for Survival” by Chris Gayomali, April 05 2011

¹⁹² Ibid.

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before), and some policing entity will need to be put in place to make sure that the ebook industry doesn't come to be dominated by farmers. Or pirates. Or whatever they are.

"After all: if a self-published 26-year-old can make millions off vampire-romance ebooks, image what a scummy publishing company could do without a moral ticker and a heap of resources."¹⁹³

Indigo is trying to shape-shift

"The wave of digital adoption that swept through music and video retailing, decimating them, is now hitting book sellers, forcing them to redefine their business model.

"The electronic revolution... is coming faster than anyone expected. In 2009 [*CEO Heather Reisman*] predicted that low-margin digital books would erode 15 percent of her traditional book business within five years. Now she's predicting it will be 40 percent."¹⁹⁴

Even that might be low (see Kindle now outselling print at Amazon, pg 47).

In response to this, "Indigo is stepping up its offerings of tableware, toy and tote bags – even putting comfy chairs back in the stores, in the hope of stemming the tide of consumers [*who are*] abandoning the retail for Web-based alternatives."¹⁹⁵

Good luck with that one.

"U.S. ebook sales, which stood at less than \$1 billion in 2010, will nearly triple to \$2.8 billion by 2015, according to Forrester research estimates."¹⁹⁶

Based on numbers less than three months later, even that estimate is probably low... way too low. And aside from Ms. Riesman's observation that digital delivery does not require bricks-and-mortar stores, I'm not so confident about her leopard-changing-its-spots business strategy. There are already a lot of other businesses selling tableware, toys and tote bags, and they are very good at what they do.

Amazon in the libraries

"Amazon today announced Kindle Library Lending, [*which*] will allow Kindle customers to borrow Kindle books from over 11,000 libraries in the United States. Kindle Library Lending will be available for all generations of Kindle devices and free Kindle reading apps."¹⁹⁷

"Customers will be able to check out a Kindle book from the local library and start reading on any Kindle device or free Kindle app for Android, iPad, iPod touch, iPhone, PC, Mac, BlackBerry, or Windows Phone."¹⁹⁸

¹⁹³ Techland: "Dying Content Farms May Turn to Ebooks for Survival" by Chris Gayomali, April 05 2011

¹⁹⁴ The Globe and Mail: Indigo's Heather Reisman Faces Digital Reckoning" by Marina Strauss, April 09 2011

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

¹⁹⁷ Librarian by Day: "This morning Amazon announced the Kindle Lending Library" by Bobbi L. Newman, April 20 2011

¹⁹⁸ Pattern Recognition: "Kindle Library Lending" by Jason Griffey, April 20 2011

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If the patron checks out the same Kindle book from the library, or subsequently purchases the book from Amazon, all of the user's annotations will be preserved, but *only* for that user.

Blogger Bobbi L. Newman (Librarian by Day) listed two questions she had for OverDrive/Amazon, questions shared by many librarians, as follows:

- *Will I be allowed to borrow library ebooks in epub and pdf format on my Kindle?*
- *Will owners of other devices... be allowed to read Kindle books on their device?*¹⁹⁹

And OverDrive posted the following answers:

- *Your existing collection of downloadable eBooks will be available to Kindle customers. As you add new ebooks to your collection, those titles will also be available in Kindle format for lending to Kindle and Kindle apps. Your library will not need to purchase any additional units to have Kindle compatibility. This will work for your existing copies and units.*
- *A user will be able to browse for titles on any desktop or mobile operating system, check out a title with a library card, and then select Kindle as the delivery destination. The borrowed title will then be able to be enjoyed using any Kindle device and all of Amazon's free Kindle Reading Apps.*
- *The Kindle eBook titles borrowed from a library will carry the same rules and policies as all our other eBooks.*²⁰⁰

Kindle outselling print at Amazon

"The Seattle-based company announced Thursday that it is now selling more e-books than books printed on paper.

"...every day since April 1, Amazon has sold 105 Kindle books for every 100 physical books, paperback and hardcover – suggesting the growth of digital book sales is now sustained.

"Customers are now choosing Kindle books more often than print books. We had high hopes that this would happen eventually, but we never imagined it would happen this quickly."²⁰¹ - Amazon CEO Jeff Bezos.

American ebook sales are up **145.7%** in March 2011 compared to March 2010.

Albert Greco, professor of marketing in the Gabelli School of Business at Fordham University in New York, predicts nonetheless that it will be "a long time before print falls away completely." And that: "...ebook revenues in the U.S. will reach \$1.2 billion this year, compared to revenues of \$9.3 billion for print."²⁰²

¹⁹⁹ Librarian by Day: "This morning Amazon announced the Kindle Lending Library" by Bobbi L. Newman, April 20 2011.

²⁰⁰ Ibid.

²⁰¹ The Globe and Mail: "Kindle sales eclipse print at Amazon" by Susan Krashinsky, May 19 2011

²⁰² Ibid.

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“On the U.K. site, where Amazon has sold Kindle books for nine months, it sells more than twice as many digital books as hardcover books.”²⁰³

The tipping point

The overarching view of industry analysts is that when the price of e-readers drops below the \$100 psychological barrier, sales of ebooks will grow explosively. At an ebook session at CLA this year, Richmond Public Library chair Pam Watson predicted that in the digital delivery world of the near future, content providers will be either discounting e-readers or even providing them free with subscription plans. Professor Greco concurs.

“If someone could come up with [*a contract-based*] business model, they could revolutionize this business in six months. No kidding.”

Kobo launches a new version of its e-reader

“Toronto’s Kobo Inc. has launched its latest e-reader, a wireless device with a touch screen that is priced to compete with the market-leading Amazon Kindle.

“The new Kobo eReader Touch Edition will be available starting May 23rd for pre-order... for \$129.99 (U.S.)...”²⁰⁴

Also, Kobo CEO Michael Serbinis “...declined to comment on rumours that Apple Inc. is interested in buying Kobo...”²⁰⁵

Perhaps it is no coincidence that Kobo “said last week that its Reading Life social reading app for the iOS platform and Android has moved into the top rated position in the Apple iTunes App Store.”²⁰⁶

And another competitor shows up for the party

“In a surprising move, library equipment manufacturer 3M Library Systems recently announced that it would be unveiling a new ebook lending service for libraries – including an in-library “Discovery Terminal”, 3M eReaders, and 3M apps – at the American Library Association (ALA) annual conference... in June.”

“The ebooks available under the system would follow the Onebook/one user model, and use the EPUB format as well as Adobe digital rights management (DRM), as OverDrive’s ebooks do.

“One as-yet unknown element of the new system is its ease of use for patrons, which has been a sticking point for librarians using OverDrive’s system in the past. For example... librarian Katie Dunneback... pointed out that it took nearly two dozen steps to download an OverDrive ebook and transfer it to a device.”²⁰⁷

²⁰³ The Globe and Mail: “Kindle sales eclipse print at Amazon” by Susan Krashinsky, May 19 2011

²⁰⁴ The Toronto Star: “Kobo goes up market, targets Kindle” by Michael Lewis, May 23 2011

²⁰⁵ Ibid.

²⁰⁶ Ibid.

²⁰⁷ Library Journal: “3M to Launch Library Ebook Lending Service at ALA Conference” by David Rapp, May 23 2011

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Tablets are predicted to displace e-readers

This may seem counterintuitive on the face of it, but the digital world doesn't favour specialization, and techno-species that can only do one thing – no matter how well they do it - don't tend to last; for example, the longevity of the PS3 gaming console is directly related to its ability to serve as Blu-ray player, whereas portable gaming devices that only play games (as opposed to those which make phone calls) don't have the same life expectancy. E-readers too are on more than one uber-geek's list of things that are going to vanish sooner rather than later. The rationale behind this prediction is that tablets like the iPad not only serve perfectly well as book readers, they also do many other things. And when as with all technology the price of those tablets begins to drop significantly, and the ebook supply chain matures and formats stabilize, the tablet will reign supreme in the digital book world.

In-Stat's marketing group is that revenue from tablet apps alone will surpass \$15 billion in 2015. So that might be something for library administrators to keep in mind when they're settling on long-term ebook strategies.

The Storm Surge Draws Closer

'Downloads of e-books by Toronto Public Library users have increased nearly 400 percent over the past year, according to the library's data.'²⁰⁸

"In May, readers accessed 21,736 e-books versus 5,629 in May, 2010, [*Director of Collections Management Vickery*] Bowles said."²⁰⁹

Impressive as this surge is, it is again important to keep the numbers in context. The library circulated 32 million copies of physical items compared to 257,700 electronic ebooks and downloadable Audiobook; in other words, the latter measured exactly 8/10th of a percent of the library's total circulations.

Ebook in the libraries

In the fourth week of May of this year, two major events involving public libraries took place in North America. One was BEA (BookExpo America) in New York City, NY. The other was the CLA (Canadian Library Association) in Halifax, NS. A hot topic at both events was ebook. In this whitepaper we will discuss only BookExpo 2011. The CLA sessions will be reviewed separately.

"E-Book Era is Now: What does it look like from the consumer perspective? And what do we do about it?"²¹⁰

At BookExpo the discussion ranged from the big picture (the social impact of the explosive growth of digital media) to the nitty gritty (HarperCollins' controversial circulation cap).

The panelists were Robin Nesbitt, the technical services director at Columbus Metropolitan Library in Ohio; Michael Santangelo, electronics resource specialist at Brooklyn Public Library; Katie Dunneback, a consultant with East Central Library

²⁰⁸ The Toronto Star: "'Huge spike' in eBook downloads at Toronto libraries" by Paul Moloney, June 07 2011

²⁰⁹ Ibid.

²¹⁰ Library Journal: "At BEA, Librarians Describe Challenges and Future of Ebooks" by Michael Kelley, May 25 2011

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Services (Iowa); and Michael Colford, director of resource services and information technology with Boston Public Library.

“The panel for the most part struck a conciliatory tone toward publishers, and toward HarperCollins in particular...”

“Both Nesbitt and Santangelo said HarperCollins deserved credit for fostering a dialogue and a starting point for negotiations with libraries, unlike other publishers such as Macmillan or Simon and Schuster...”

“All four panelists described an exponential upward demand for ebooks. Colford said he expects: “... the [Boston] library’s ebook budget to triple next year...”

“At Columbus, ebook circulation has jumped about 140 percent and the ebook budget has soared from about \$30,000 a year to \$350,000 a year with more growth to come.”²¹¹

Again, the old problem with OverDrive’s clunky interface was up for discussion. “Ease of use remains a big issue and a place where publishers can lend libraries a hand...”

“If the technology that delivers an ebook to an e-reader were invisible, usage would skyrocket,” Dunneback said.²¹²

Unfortunately creating a transparent portal is not an easy task; in fact, it has been described to me by our own technical people as “impossible” given the current level of even the most advanced ILS search and integration technology. There is hope that Sierra, Millennium’s next generation ILS, will address this, but there is no information available as yet as to whether this will be the case. And even then, to purchase and migrate to a new ILS simply to increase the transparency of the digital delivery system hardly seems justifiable.

And finally, all four panelists agreed that libraries would not be well served by the Freegal model (see Music, pg 76) where [the libraries] simply foot the bill for whatever patrons choose to download.²¹³

Four questions

From an outsider’s viewpoint, it seems like there are dozens of major challenges and issues facing libraries as they steel themselves for the tsunami of ebook usage. But this whitepaper isn’t long enough to address all of them. So I’ll at this time I’ll focus on just four:

When should we start planning for ebooks?

Yesterday. What may have seemed like a disruptive force which swept through the library community, turning everything upside down, may have actually been a blessing. Ebook is only the *first* of the major digital formats to which the libraries will be forced to adapt; but fortunately, it has arrived *well ahead* of the others, most notably audiovisual. And this gives libraries a huge opportunity. They can deal with digital books now without

²¹¹ Library Journal: “At BEA, Librarians Describe Challenges and Future of Ebooks” by Michael Kelley, May 25 2011

²¹² Ibid.

²¹³ Ibid.

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having to simultaneously adapt to other huge challenges. They can focus on delivery models, develop supplier relationships, acquire and beta-test new systems, deal with unanticipated customer support issues, staffing adjustments, and other upheavals as yet undreamed of, and in the course of all this, develop a broad template of digital strategic response which will be invaluable when the era of streaming video arrives in the library world. The alternative, in which libraries wait until they are forced to deal with ebook and digital video and who knows what else simultaneously, will leave them swamped with challenges on another order of complexity, no real problem-solving experience in any area nor the wherewithal gained from that experience, and thus, less chance of success. Or as Christina de Castell (Manager, Online Information and News, Vancouver Public Library) so eloquently put it: "This is the moment when people decide whether the library is part of the ebook picture, or whether it is left out of the equation."

Because if we consider ebook a disruptive format, just wait until it becomes possible to stream relatively recent feature theatrical releases through the library. The impact that this demand will put on library financial and technical systems will dwarf anything that has come before.

So... *now* is the time for libraries to develop that culture of response, not next year, or next month, or next week or even tomorrow. If librarians wait until the next even greater digital tsunami sweeps over them, and they have not sorted out the ebook issues, it may be too late. Now, this response may not be a cookie-cutter template that the libraries can apply exactly to each new format challenge, but rather may take the form of a change in the attitude of the institution at the deepest level. Libraries need to be more flexible, more rapid in their decision making: forget about 5-year, 3-year, even 1-year strategic plans; they're too long-term. Libraries need to be evaluating where they stand on a 6-month basis, even a quarterly basis, and standing ready to change directions, shift resources and budgets *immediately*, on the spot if necessary.

Do libraries need to own ebooks, and other digital materials?

When libraries say they want to "own" their ebook collections, what exactly does that entail? To begin with the associated costs will not be confined to the cost of the hardware, software, and bandwidth, though those costs in and of themselves should give any library pause to reconsider. There will also be considerable staffing costs, personnel with the technical expertise to manage the hardware and the DRM and so on. The maintenance costs alone will be prohibitive. And what happens if or when demand rapidly and unpredictably increases by another order of magnitude, when the library has already invested massively in hardware, software, and staffing and suddenly finds out that it only has 1/10th of what it needs? Even in the unlikely event that the library's budget included provisions for this kind of massive upgrade and could afford to scale up to meet this demand, the development schedule alone – the time required to scale up - would be a huge additional obstacle. The ability to scale upwards or downwards overnight is what is required, and that ability is found only in the clouds.

In short, libraries are in the business of providing materials to its patrons. They are not technology companies, nor should they try to *become* technology companies. And I think most libraries would agree with this.

So then why should libraries want to own the content? The answer is always the same: they don't want to be held hostage by e-vendors during service contract negotiations.

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Our case in point is Kansas: the number one concern of the libraries was that if negotiations fell through with OverDrive, all their content would be yanked.

In other words, what libraries really want is security, and rightly so. Who cares if one “owns” something or not, as long as it can *never be taken away*? So let’s take the concept of “ownership” right out of the discussion, because the real issue is not ownership, it is *security*. And that can be negotiated in a competitive environment. Granted, said environment is hardly competitive at the moment, but that is going to change in a hurry, I assure you. So the problem then, is that, temporarily anyway, the libraries are enduring a monopoly. Once the library ebook market has matured and – among other things – features an entire constellation of vendors who are in healthy competition with each other, security, better pricing, and circ caps will all be on the bargaining table, and will all be negotiated in good faith.

How should libraries deal with publishers’ circulation caps?

Well, petitions and online rants don’t seem to be working, so that’s no solution. And the reason that these approaches are not working is because HarperCollins is a capitalist entity whose mandate is, by its very nature, to generate *capital*. And since HarperCollins has obviously come to the conclusion that by allowing the libraries unlimited circulations they will lose money, they have decided that it is better *not* to do business with the libraries at all than to do business under the unlimited circ model.

On the other hand, this is just an opening suggestion from HarperCollins, and they would be bad business people if they began negotiations by offering the *real* number of caps that they would tolerate. And while 26 circs does seem a little unreasonable, so does the libraries’ insistence that they be allowed to circulate an ebook *forever*; surely, then, there must be a number somewhere between infinity and 26 which lies within the intersection of the two opposing circles of reason, and which would therefore be acceptable to both parties. The key, therefore, is to get HarperCollins to the negotiating table, and keep them there until a resolution is achieved. And how would this resolution be achieved? See below.

How do libraries deal with publishers who won’t make ebooks available at all?

They’re capitalists. Just like HarperCollins and its cap restriction, Macmillan and Simon & Schuster aren’t letting libraries have their ebooks because they think they will lose more money out in the retail market than they’ll make in the library market. Simply put, they don’t think it’s worth their while. So bring them metrics to prove that that it *is* worth their while.

How? Well, I would identify historically comparable authors (sales-wise) handled by publishers which do business in the libraries versus those that do not. Then I would establish whether or not those authors whose ebooks also appear in library collections sell more, the same, or less in the retail sector than those authors whose books do not appear in library collections. And if it turns out that ebook retail sales are at the very least unhurt by having those same ebooks in the libraries, then those reluctant publishers should be very quick to come on board.

NETFLIX

There are two reasons that this company gets its own whitepaper: one, it is a paradigm-changer which has shaken the video industry to the core; and two, its media-savvy management has succeeded in making its corporate name a virtual synonym for digital video streaming. For a company its size, Netflix generates an astonishingly disproportionate amount of media attention; indeed, I get a press release about Netflix almost every day. Why? Because as previously mentioned, CEO Reed Hastings and his management team fully understand the concept of mindshare.

Mindshare

Mindshare is hardly a brand new industry buzzword (it has even earned a Wikipedia page), but it is persistent and – more importantly – apt. The term refers to a share of the global human consciousness, or group mental “real estate”²¹⁴. Everyone in business wants it, and those that have it in great measure can become so entrenched in the global consciousness that their company names become synonymous with the actual product that they sell: Kleenex for tissues, Coca-cola for cola, Hoover for vacuuming, and so on.²¹⁵

Impact of Netflix

There’s no question that Reed Hastings is a visionary. He apparently got the idea for the original disc mailing service when he was charged a late fee by his local video store. But he’s also a publicity genius. Throw in the fact that he doesn’t seem to care a whit what people (including his own customers) think about his business moves, and the result is that Netflix has been and remains to date a significant factor in shaping the current course of media technology. In short, even if Netflix went out of business tomorrow (highly unlikely, of course), the effect it has had on the global video business would still reverberate for some time to come.

History

Netflix was launched in April 1998 as a mail order rental outfit and introduced its monthly subscription service in September 1999, dropping the single-rental fee model shortly thereafter. It went public in May 2002 and has been one of the most successful internet based performers. It reportedly mails out on average *a million discs a day*.

“Netflix capitalized on the success of the DVD and its rapid expansion into U.S. homes, integrating the potential of the Internet and e-commerce to provide services and catalogs that brick and mortar retailers could not compete with.”²¹⁶

On January 15 2007 Netflix launched a new streaming service: “Watch Instantly”. On September 22, 2010 it announced that the streaming service would be available in Canada. The company next made waves on November 22 2010 by announcing a streaming-only subscription plan in the U.S. that did *not* include DVDs.

Analysts have been concerned that Netflix would “likely cannibalize its own subscriber base as it gains in streaming...” and “...likely decrease its average revenue per user.”

²¹⁴ For a more detailed description please refer to the 2010 Emergent Technology Report

²¹⁵ Wikipedia: search “Mindshare”

²¹⁶ Wikipedia: search “Netflix”

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But Netflix was obviously looking farther ahead than that. Enduring the perception from its own subscriber base that it was abandoning its profitable core DVD mail-order business in pursuit of a streaming chimera (a perception gleefully promoted by its competitors), Netflix was willing to “bet it all” on what it viewed as the future. Because management knew that if the company sat still, there were some giant competitors who were moving in the same direction; and unlike many other markets, the streaming business is all about virtual real-estate; incumbents are notoriously difficult to dislodge (that pesky issue of mindshare yet again). Netflix’s foresight was 20/20. As it turns out, both Amazon and Google, which “dwarf Netflix in size and brand recognition”²¹⁷, are indeed trying to muscle their way into the arena, and they carry very large sticks.

Another concern from analysts was the cost of content, “...something that could roll back some of the gains from streaming.”²¹⁸ There’s no question that content cost is huge. The EPIX deal alone is rumoured to have cost Netflix a *billion* USD.²¹⁹

Hastings has always insisted that he did not intend to use the Netflix streaming initiative to compete with the content providers, that he saw the company as a streaming service for prior-season television series and older films, which was actually (at least originally) intended to support the company’s own core disc rental-by-mail model. But despite this relatively modest company vision statement, Netflix has managed to generate incandescent attention²²⁰, in addition to some headlines that are worth a hundred million bucks all by themselves, for example:

Will Netflix Destroy the Internet?²²¹

“10 percent of Canadian Internet users visited Netflix.com in the week after the service launched. And they weren’t just visiting – they were signing up and watching a lot of movies. Netflix videos quickly came to dominate broadband lines across Canada, with Netflix subscribers’ bandwidth usage doubling that of YouTube users. At peak hours (around 9 PM) the service accounted for more than 90 percent of the traffic on one Canadian broadband network.”²²²

But the article, which is much more sober and intelligent than its attention-attracting headline (I can hear his editor: Manjoo! Get us some mindshare, damn it!), goes on to point out that this phenomenon is representative of what the author notes as a consumer shift away from “asynchronous” applications toward “real-time apps”, as characterized by “Netflix’s dominance over BitTorrent”.²²³

Mr. Manjoo also warns us that “when Netflix hits 20 percent of broadband use, it’s being used by just under 2 percent of Netflix subscribers.”²²⁴

²¹⁷ Globe and Mail: “At Netflix, the picture is darkening” by David Milstead, updated November 30 2010

²¹⁸ Ibid.

²¹⁹ Business Wire: “EPIX and Netflix Announce Exclusive Internet-Only Deal to Instantly Stream EPIX Movies to Netflix Members” August 10 2010

²²⁰ Rex Murphy first used the adjective to describe exactly that.

²²¹ The Washington Post: “Will Netflix Destroy the Internet?” by Farhad Manjoo, November 02 2010

²²² Ibid.

²²³ Ibid.

²²⁴ Ibid.

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But as he goes on to explain: "... broadband capacity isn't fixed." ISPs will just "...build out their capacity."

At any rate, in early December Netflix the Internet Destroyer issued a press release that, among other things, officially rebranded the company as follows: "We are now primarily a video company delivering a wide selection of TV shows and films over the internet."²²⁵ The company's transformation, apparently, was complete.

But analysts still dithered and fretted over Netflix, the naysayers among them being quick to point out that the savings earned by reducing the company's \$600 million annual postage costs would not even begin to cover its burgeoning content licensing fees, which could easily exceed the total shipping fees just for TV content alone.²²⁶

Others ridiculed Netflix's meager catalogue and its dearth of popular new release feature films (9 out of the top 100 in 2010), comparing the offering unfavourably with the number available for iVOD at Amazon (48) and at iTunes and Wal-mart's Vudu (both 46).²²⁷

Netflix moves towards original content

"Netflix apparently has dug deep into its wallet, reportedly spending as much as \$100 million to outbid pay-TV networks for an original scripted series starring Kevin Spacey and directed by Oscar-nominated David Fincher (*The Social Network*)... a remake of the British drama series "House of Cards", according to DeadlineHollywood.com...

"They need to spend \$1 billion or so on content, so 10% of their costs on original programming is an appropriate risk to take..." – Michael Pachter, an analyst with Wedbush Morgan Securities, Los Angeles. "Their growth at this pace is unsustainable unless they start to take market share from HBO/Showtime..."²²⁸

[*Goldman Sachs analyst Ingrid*] "Chung said the percentage of streaming consumers would rise to from 16% in 2010 to 27% in 2011, and that [*the average*] hours spent watching streaming would increase from 3.4 hours in 2010 to 4.3 hours in 2011."²²⁹

Netflix Owns the Digital Streaming Market

By mid-March 2011 Netflix had become the predominant video streaming entity in the world, accounting for more than 60% of the movies streamed in the first quarter of the year. Its nearest competitor was Comcast, at 8%.²³⁰

It had also managed to cut its streaming costs (in the U.S.) as bandwidth pricing dropped, from \$0.05 for two hours of streaming in 2009 to \$0.025 for the same time in 2011.

²²⁵ Gadgetwise: "Netflix Streaming: Convenience or Quality?" by Eric A. Taub, December 06 2010

²²⁶ Home Media Magazine: "Analyst: Postage Cuts Not Enough to Pay for Netflix Streaming Content" by Erik Gruenwedel, December 09 2010

²²⁷ Home Media Magazine: "Little Movie 'Mojo' at Netflix Streaming" by Erik Gruenwedel, January 24 2011

²²⁸ Home Media Magazine: "Netflix Eyeing Original Cable Series" by Erik Gruenwedel, March 15 2011

²²⁹ Ibid.

²³⁰ Home Media Magazine: "Netflix Dominates Movie Consumption" by Erik Gruenwedel, March 15 2011

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On the negative side, on March 24th 2011 one of its original high-profile content providers, Starz Entertainment, slapped Netflix with a 90 day access delay on original programming and newly released film, describing Netflix's subscriber deal as the "ultimate example of product being sold beyond cheap."²³¹

In other words, Netflix's rock bottom subscription service is devaluing their content.

Netflix solves Canada's puny data cap problem

In Canada, the average data cap is about 20GB. High definition streaming uses about 3.5GB an hour, standard definition about uses about 40% of that; either way, it's not very hard to blow out your Canadian cap streaming video.

"The issue of data usage has become acute after Canada's top cable and telecommunications operators began incorporating caps on the amount of data subscribers could download from broadband connections without paying a premium... timing of the caps conspicuously coincided with Netflix's launch of a streaming-only service, a platform many believe threatened Canadian cable and Telco's own transactional video-on-demand services and pay-TV channels."²³²

Wow, talk about a sleazy anticompetitive work-around. But Netflix, not to be deterred, brought in an innovation called *adaptive streaming* which allows for adjusted data consumption rates to deliver video at three different levels of standard definition quality, 0.3 GB/hour, 0.7GB/hour, and 1GB an hour, and a rate of "2.3GB/hour in HD".²³³

Netflix abandons its physical media subscribers

"Since launching a streaming-only option last year and raising the monthly price to disc subscribers, Netflix has quietly begun downsizing disc acquisitions of newly released vintage movies and TV shows (notably on Blu-ray), in addition to not replacing damaged current physical inventories, observers say."²³⁴

In typical Netflix fashion, the company was made no secret about this change in focus, or even angering its own loyal base of subscribers.

Netflix makes Canada mad

And unsurprisingly, CEO Reed Hastings doesn't seem to care.

"This week, the *[company]* nabbed the exclusive rights to... titles from Paramount Pictures *[for another billion or so]*."²³⁵

"The firm's offensive here *[in Canada]*, however, is having an increasingly disruptive impact on the traditional industry, for both content rights-holders such as Astral Media Inc. and their television distributor partners, such as Rogers Communications Inc."²³⁶

²³¹ Dow Jones Newswires: "Starz plans 90-day window for some content on Netflix" by Nat Worden, March 25 2011

²³² Home Media Magazine: "Netflix Lowers Canadian Data Usage 66%" by Erik Gruenwedel, March 29 2011

²³³ Ibid.

²³⁴ Home Media Magazine: "Netflix Giving Disc the Cold Shoulder?" by Eric Gruenwedel, March 30 2011

²³⁵ Postmedia News: "Netflix's Canadian Growth draws Ire" by Jamie Sturgeon, March 30 2011

²³⁶ Ibid.

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“Netflix and other emerging online-streamers are not bound to contribute one nickel at present because they deliver content entirely over the Web, a medium the Canadian Radio-Television and Telecommunications has by and large left untouched.”²³⁷

And sure enough, about two weeks later: “Canada’s television industry is banding together to pressure the CRTC into regulating Netflix, as traditional broadcasters face a mounting challenge from the fast-growing online TV and movie service.

“Those concerns led to the formation, in February, of the “Over the Top Services Working Group [*which includes*] more than 35 executives from the telecommunications, broadcasting, and TV productions sectors, as well as union leaders. On April 1, the group sent a letter to the [CRTC] asking for a “public consultation” to consider its approach to new media.”²³⁸

And on June 14th 2011, the CRTC hinted that it would do just that.²³⁹

Meanwhile, south of the border...

There were rumours that Netflix was trying to set up a deal with HBO, which is owned by Warner. Jeff Bewkes (Warner CEO) was already mad at Netflix for stealing the “House of Cards” series deal out from under HBO’s nose. Netflix also “paid tens of millions of dollars for rights to all seasons of AMC’s “Mad Men””, alarming a lot of studio executives.²⁴⁰

Netflix available on Android

Google announced on May 12th that Netflix is now available on Android smartphones, and the following – from Google’s Android blog manager Andres Kameka - is in my top ten favourite quotes of the year:

“The long wait has ended and you can finally fire up the entire catalog of ‘Dr. Who’ and eat away at all of your productivity for the day.”²⁴¹

Bandwidth controversies... again

“ISPs who are able to get away with outrageous behavior in other countries [*other than the U.S.A.*] have done so with gusto. Canadian data caps, for instance, aren’t like the 150GB or 250 GB cap in place at AT&T and Comcast; there [*in Canada*], several national ISPs start at 2GB a month.”²⁴²

Wonderful. Now our country is an international pariah, an example of ISP malpractice.

²³⁷ Postmedia News: “Netflix’s Canadian Growth draws Ire” by Jamie Sturgeon, March 30 2011

²³⁸ Broadcasters call for CRTC to regulate Netflix service” by Susan Krashinsky, April 14 2011

²³⁹ See “The CRTC finally gets involved”, page 26

²⁴⁰ Home Media Magazine: “Bewkes: ‘We Don’t Understand’ an HBO-Netflix Deal” by Erik Gruenwedel, May 11, 2011

²⁴¹ Home Media Magazine: “Netflix comes to Android” by Chris Tribbey, May 12 2011

²⁴² Wall Street Journal: “Data caps keep Netflix from “swamping the network”” by Nate Anderson, May 15 2011

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The counter-argument

"...scarcity is the engine of progress... Consumption pricing is *always* the path to innovation and new inventions. And consumption pricing always leads to conservation of expensive resources. I hope everyone here understands that bandwidth capacity is very expensive."²⁴³

Netflix passes surfing

"A study published Tuesday by Sandvine Inc. shows that Netflix movies and TV shows account for nearly 30 percent of traffic into homes during peak evening hours, compared with less than 17 percent for Web browsing.

"The number of Netflix customers is growing quickly, to 23.6 million subscribers in the U.S. and Canada as of the end of March. However, its growing popularity is considered a potential danger to profits for Canada's cable operators..."²⁴⁴

"The growth in Netflix traffic doesn't mean overall Internet traffic is growing faster than before. Rather, it means the type of traffic that's driving growth has shifted, as it has several times before."²⁴⁵

"Internet service providers are increasingly placing monthly limits on each subscriber's data consumption and charging extra when the limit is surpassed. Analysts see this strategy as insurance for the future, in case viewing shifts from traditional services to the Internet."²⁴⁶

Content is getting expensive

Hastings has never hidden the fact that content costs were onerous.

"Netflix has over 24 million subscribers and is trying to grow its base so that it can spend more money on purchasing content. But, Hastings admitted, keeping up with new material that customers want is "very expensive," and the site can't maintain an eight-dollar-per-month streaming model while offering access to new shows and movies..."²⁴⁷

"As he has in the past, Hastings emphasized that Netflix sees itself as a complement to new content providers rather than a direct competitor. Instead of providing premium, instant access to content that pay-per-view and on-demand services offer, Netflix focuses on prior seasons of television shows and movies that have already hit DVD."²⁴⁸

Which is probably why they're turning back to disc; they just spent a hundred million on *one piece* of original content (House of Cards). The good stuff doesn't come cheap."²⁴⁹

²⁴³ Wall Street Journal: "Data caps keep Netflix from "swamping the network"" by Nate Anderson, May 15 2011

²⁴⁴ Toronto Star: "Netflix overtakes Web surfing as biggest source of Internet traffic" by Peter Svensson (AP), May 17 2011

²⁴⁵ Ibid.

²⁴⁶ Ibid.

²⁴⁷ The Huffington Post: "CEO Reed Hastings: All Netflix needs to get content is a big check" by Amy Lee, June 01 2011

²⁴⁸ Ibid.

²⁴⁹ See "And then, suddenly...", page 15

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Netflix stock hits an all-time high

“The company has been a bit of a thorn in the side of studios and cable companies because its online video offering -- unlimited streaming for \$7.99 a month -- is a more economical TV and movie option when compared to buying DVDs or large monthly cable bills.

"Netflix is a disruptive play. Streaming video online at cheap prices is something that could even do well in a downturn," said Gerry Sparrow, chief investment officer with Sparrow Capital, a St. Louis-based money manager that owns shares of Netflix in the Sparrow Growth Fund.

“The company continues to justify all the hype. Earnings in the first quarter nearly doubled from a year ago and beat analysts' expectations. Sales rose 46%. Netflix ended the quarter with 23.6 million users, propelling it past Comcast (CMCSA, Fortune 500) as the top provider of subscription video content.”²⁵⁰

Earnings beating predictions aside, in brokerage terms, the market is currently valuing Netflix at far more than its current performance (admittedly solid as it is) would justify; in other words, its stock price is speculative, which may or may not bode well. We shall see.

Netflix as a disruptive force

But to reiterate, the bottom line is that Netflix has already been a very disruptive force and a huge factor in shaping the way that media is delivered to the consumer. Even if the company itself fails, nothing will now change that.

²⁵⁰ CNN Money: “Netflix Stock Hits All-Time High” Paul R. La Monica, May 31 2011

3D

How current 3D technology works

To recap, the human brain uses thirteen separate perceptual cues to establish depth in 3 dimensions. Two of them are “binocular”, and eleven of them are “monocular”. There are two forms of 3D technologies used today, stereoscopic and autostereoscopic (see immediately below). Both trick only *one* perceptual faculty: binocular parallax, in which the occipital cortex uses the two separate fields provided by binocular vision to establish distance, a brilliant trigonometric evolutionary adaptation, ideal for predation, particularly in the open savannahs in which our hominid ancestors first arose.

A primer on current 3D technology

There are currently two commercially available technologies: stereoscopic 3D, and the newer autostereoscopic 3D. Stereoscopic 3D requires glasses. Autostereoscopic 3D uses a parallax layer to simulate 3D and does *not* require glasses (as with the Nintendo 3DS).

Stereoscopic 3D is subdivided into two types: the first is *passive* stereoscopic 3D. It is referred to as “passive” because the lenses of the glasses are polarized to admit a different image to each eye. This is the type of 3D one sees in the cinema. The second type is active, or shutter-glass (SG) 3D.

With shutter glasses: “Each eye's glass contains a liquid crystal layer which has the property of becoming dark when voltage is applied, being otherwise transparent. The glasses are controlled by an infrared, radio frequency, DLP-Link or Bluetooth transmitter that sends a timing signal that allows the glasses to alternately darken over one eye, and then the other, in synchronization with the refresh rate of the screen. Meanwhile, the display alternately displays different perspectives for each eye, using a technique called alternate-frame sequencing, which achieves the desired effect of each eye seeing only the image intended for it.”²⁵¹

Binocular dystrophy revisited

To recap an issue investigated in the 2010 Report, a possible problem which has aroused concern is that during the simulated 3D experience, the brain is receiving conflicting impressions of distance; on the one hand, one powerful mid-distance cue is telling the occipital cortex that multiple objects are all different distances away; on the other hand, twelve other cues are telling the occipital cortex that everything is the *same* distance away. The brain is forced to make a choice between one of two conflicting impressions. The vast majority of viewers report that they feel disoriented for the first few minutes when watching 3D, after which things on screen seem more “normal”. Immediately *after* the experience, some viewers report feeling disoriented for a few seconds or even a few minutes, after which the symptoms clear up. For a few people, the initial transition never takes place. For others, the transition takes place, but report rather more disturbing and/or long-lasting symptoms in the aftermath. Game developers in the 90s who spent full working days in the environment for weeks on end, reported similar symptoms; ominously, these symptoms were also significantly more long-lasting.

“Optometrists say as many as one in four viewers have problems watching 3-D movies and TV, either because 3-D causes tiresome eyestrain [*or binocular dystrophy*] or

²⁵¹ Wikipedia, search “Liquid Crystal Shutter Glasses”

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because the viewer has problems perceiving depth in real life. In the worst cases, 3-D makes people queasy, leaves them dizzy or gives them headaches.”²⁵²

Some individuals are particularly concerned about the prolonged effects of 3D technology on children, whose brains are still developing and who may be immersed in the simulated 3D environment for prolonged periods of time, primarily during extended gaming sessions.

“Research into how today’s 3D screens affect viewers is only in its early stages. There have been no large-scale scientific studies.”²⁵³

“That isn’t deterring the entertainment industry, which is aware of the problem yet charging ahead with plans to create more movies and TV shows in 3D.”²⁵⁴

The year 3D saved Hollywood

Unfortunately, the year 3D saved Hollywood was the year *before*: 2009. And that was in the theatres. 2010 was supposed to be the year when 3D home entertainment made the difference. But the studios failed to get enough 3D Blu-ray releases out of the gate to match the players and compatible 3D televisions that were ready and waiting. The “studios had originally committed to an aggregate 50-60 Blu-ray movie titles at launch (of the 3D players), which given the ever-growing movie catalog that Hollywood is churning out, seemed entirely reasonable and believable. Unfortunately, this last prediction turned out not to be the case, and...” the industry found itself in September of that year without much content to play on their new technology.²⁵⁵

So in fact the studios missed two huge opportunities: one, to establish a home entertainment 3D beachhead, and two, to pump up flagging disc revenues.

3D has not lived up to early expectations

“Early expectations of 3D were over-hyped by the press, while current coverage laments the fact that 3D has not lived up to its promise. The reality is somewhere between the two extremes. 3D channels have been launched in North America, Europe and Asia in 2010. More will come in 2011. In addition to linear [*cable*] TV channels, 3D content is being made widely available of pay-TV providers’ VOD systems. Those who are experimenting with 3D VOD now are expected to make linear 3D as well. The result is an anticipated increase in the number of 3D channels to over 100 by 2015.”²⁵⁶

Disney in particular has vowed to mend the error of its ways in 2011, with its new release catalogue loaded with 3D feature content. Accordingly, the studio plans to release 15 films in 3D Blu-ray this year, “underscoring Hollywood and the consumer

²⁵² Associated Press: “3-D means headaches to many, yet companies push on” by Peter Svensson, January 20 2011

²⁵³ Ibid.

²⁵⁴ Ibid.

²⁵⁵ PerfectVision: 3D Blu-ray off to Rocky Start as Studios Fail to Deliver the Goods” by David Birch-Jones, September 08, 2010

²⁵⁶ In-Stat: “Number of 3D channels to surpass century mark by 2015”, In-Stat, March 16 2011

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electronics industry's push to drive the popular high-definition theatrical format into the home."²⁵⁷

Nintendo 3DS

Also presumably riding to the rescue of 3D was the shiny new Nintendo 3DS. "Nintendo has announced that it will begin selling the new Nintendo 3DS handheld gaming device on March 27th and that it will carry a price tag of \$249.99 [USD]."²⁵⁸

The press release also included the now-inevitable caveat from 3D hardware makers: "There have been conflicting reports about the effect 3-D video and game viewing might have on young children's eyes. Nintendo is advising parents not [to allow] children younger than 6 years old play the machine in 3D."²⁵⁹

Another feature of the Nintendo 3DS, perhaps the most astonishing of all, is that, even though it is still a stereoscopic system (in that it tricks the occipital cortex by simulating 3D parallax) "the 3DS employs a technique known as a parallax barrier to produce a 3-D effect without the need for special glasses. A parallax barrier is essentially a thin layer that sits on top of the screen. The barrier consists of tiny slits that block certain parts of the image from each eye. When positioned the right way, a screen employing a parallax barrier can give the viewer the impression that the images are jumping out."²⁶⁰

But all is not going according to plan

The featured technological wonder of the 3DS notwithstanding, Omar El Akkad of the Globe and Mail has labeled the device: "...the last best hope for the massively over-hyped 3-D home entertainment market."²⁶¹

And maybe it's because of those glasses

Right now the glasses have proven the main barrier to full-scale adoption of the format; in fact, they've made a Gizmodo Australia technology extinction list.

"Wearing stereoscopic (3D) glasses in a movie theatre, where the environment is optimal, the screen is gargantuan, and the nerd stigma of the glasses themselves is minimized, is one thing. But at home, it's a different story. Not only will you invest a ton o' bucks on a 3D-capable television and 3D glasses for everyone who watches said TV, but even then the content, the quality, and the three-dimensional impact are lacking."²⁶²

"And the one other inescapable fact – those glasses are a total hassle. If you already wear prescription glasses, they're a hassle. If you watch TV while you're doing other things, they're a hassle."²⁶³

²⁵⁷ Home Media Magazine: "Tron' among Disney's 2011 3D Blu-ray Release Slate" by Erik Gruenwedel, January 03 2011

²⁵⁸ In-Game: "Nintendo 3DS launching on March 27th for \$250" by Winda Benedetti

²⁵⁹ Ibid.

²⁶⁰ The Globe and Mail: "The death of depth: How electronics makers failed to make 3-D matter" by Omar El Akkad March 30 2011

²⁶¹ Ibid.

²⁶² Gizmodo Australia: "12 Technologies on the Verge of Extinction" by Gord Goble, January 13 2011

²⁶³ Ibid.

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We get the picture. Home electronics spending tends to come in cycles (DVD player, then flat screen, then HD TV, then Blu-ray player, then... 3D).

But according to El Akkad: “So far, electronics vendors have pushed 3D largely on the back of high-intensity shoot-em-up video games, action movies and high-contrast animated romps. And indeed, that might be what 3D TV is destined for – relegation to a sort of side-feature that users switch on every once in a while when they just want to watch stuff blow up.”²⁶⁴

But “that’s not enough – not when companies expect consumers to shell out upwards of three or four grand to [replace] a television set they may have only purchased a year or two ago, back when the same companies were pushing them to upgrade their older sets to HD TVs.”²⁶⁵

Bottom line: “...the 3D stuff is novel at first, but it isn’t really necessary...”²⁶⁶

Help is on the way, but it’s still far, far away

The good news for Hollywood is that a new sheriff is in town. The bad news is that he’s still a baby, and no one knows how quickly he’s going to grow up, take over, and set this 3D mess to rights.

Surface-Plasmon Holography

As opposed to stereoscopic or autostereoscopic 3D technology, Surface-Plasmon Holography “provides real 3D imaging [we’ll forgive the oxymoron].” At this point in time, the technology is still in the embryonic stage, and but scientists Miyu Ozaki (Riken Wako, Japan), Jun-ichi Kato (Department of Robotics and Mechatronics at Tokyo Denki University), and Satoshi Kawata (Department of Applied Physics and Photonics Advanced Research Center, Osaka University)²⁶⁷ “report on a holographic technique based on surface plasmons that can reconstruct true 3D colour images, where the colours are reconstructed by satisfying resonance conditions of surface plasmon polaritons for individual wavelengths. Such real 3D colour images can be viewed from any angle, just like the original object.”²⁶⁸

The announcement and the publication of the abstract was met by the usual sour grapes and dismissive comments, a lot of faint praise, and one grudging: “It’s a good scientific achievement...”²⁶⁹

The bottom line is, this new technology, perfected and scaled up for consumer use, will absolutely revolutionize the viewing experience as nothing has done since 19th century innovators discovered that stringing a rapid succession of photographs together produced an illusion of motion that realistically simulated movement in the real world.

²⁶⁴ The Globe and Mail: “The death of depth: How electronics makers failed to make 3-D matter” by Omar El Akkad March 30 2011

²⁶⁵ Ibid.

²⁶⁶ Ibid.

²⁶⁷ Just in case you thought they were a bunch of dope-smoking slackers

²⁶⁸ Science: “Surface-Plasmon Holography with White-Light Illumination” by Miyu Osaki, Jun-ichi Kato and Satoshi Kawata, April 08 2011

²⁶⁹ Physicsworld.com “Holography sharpens up” by James Dacey, April 11 2011

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Holography produces a truly 3 dimensional image that changes respective to the position of the view to that image; for example, let's take the holographic image of a man standing in a room. If you are in front of him, you see his front; if you are behind him, you see his back, exactly as though you were viewing a real person. Think of the possibilities. A circular cinema designed like the ancient Greek amphitheatres, with the holographs "acting" on a central stage, or communicating with others in a specially designed projection room, where you and the caller's three-dimensional image, or avatar, would meet. Eventually, the avatars would be so life-like as to be indistinguishable from the original from which it is projected. We were told that this technology is years away. But that is not entirely true...

It's all James Cameron's fault

Just in case you didn't know, this whole 3D thing is James Cameron's fault; well, his and his partner Vince Pace's fault, who co-developed the Fusion 3D camera system with him, and which made Avatar possible. Perhaps you remember that box office flop. It only made a billion dollars.

At any rate, 3D is their fault. Since the success of Avatar, the entertainment industry has gone into a 3D frenzy, as it were. And JC (hey, aren't those initials suspiciously familiar?) has done nothing to tamp down the flames of 3D desire; in fact, he's thrown gasoline on those flames at every opportunity. Everywhere he looks, JC sees 3D.

Cameron: "Broadcasting is the future of 3D. *[Within two years]* everything will be produced in 3D and 2D versions will be extracted from that... Our strategic plan is to make 3D ubiquitous over the five to ten years on all platforms."²⁷⁰

Pace: "The business model had to start with service filmmaking. There are a lot of myths about the barriers to entry... To grow this market correctly, we need to let people do what they do and [let] the use of the tools be transparent."²⁷¹

Sorry, that last quote; does anyone know what he means? 'Cause I sure don't.

"Cameron predicts... that there will be 100% market adoption of 3D in cinemas within five years... *[the]* home market may take longer – at least until glasses-free 3D is perfected – at which point he predicts that *[the]* market "is going to go ballistic".²⁷²

Speaking of which...

Meanwhile, back at MIT

"Researchers at Massachusetts Institute of Technology (MIT) have demonstrated the highest frame rate yet for a dynamic hologram that can recreate evolving 3D scenes. The breakthrough means that holographic television is now tantalizingly close to industry frame rates at a time when 3D cinema is fully back in vogue. A big appeal of holograms of established 3D image projection is that the viewer can see the effect unaided *[as previously described]*."²⁷³

²⁷⁰ Techland: "James Cameron: All Movie Theatres 3D in Five Years" by Graeme McMillan, April 12 2011

²⁷¹ Ibid.

²⁷² Ibid.

²⁷³ Physicsworld.com: "Holographic video comes up to speed" by James Dacey, January 25 2011

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Now a group at MIT's media lab²⁷⁴ under the leadership of Michael Bove Jr. has raised the bar once again by creating a system that can reproduce a 3D scene 15 times a second. And the MIT system uses a novel design that only requires one camera, a commercially available range-finding camera that can record both the luminance and depth of a scene.²⁷⁵

Without getting into the details, footage is sent to a computer equipped with three graphics processing units that use an algorithm which can calculate the patterns needed to reproduce the moving 3D images." [Bove] says that he is confident that his team can boost this rate even higher to the 24 frames per second of feature films or the 30 frames per second of television." And that "...within the next few years, [*the Object-Based Media Group's*] method of creating dynamic holograms could become available commercially..."

Technology writer Paul Ridden put the perspective of this huge achievement very elegantly as follows:

"...rumblings of science fiction becoming science fact have emerged from the lab of MIT's Object-Based Media Group."²⁷⁶

²⁷⁴ The Object-Based Media Group, to be precise

²⁷⁵ Ibid.

²⁷⁶ Gizmag: "Consumer holographic TV creeps closer to reality" by Paul Ridden, January 30, 2011

PIRACY

The stats are alarming

“A comprehensive new study released today by the brand and trademark monitoring firm Envisional found that 23.8 percent of global Internet traffic involves digital theft, with BitTorrent account for almost half (11.4 percent). And traffic numbers for the United States showed that over 17 percent of the US Internet traffic is estimated to be infringing, with BitTorrent responsible for more than half (9 percent).”²⁷⁷

Additionally, the analysis of the top 10,000 peer-to-peer swarms... found that 99.24 percent of the non-pornographic material was copyrighted material.”²⁷⁸

“Our society would not tolerate a situation where one-quarter of all the traffic in and out of the bakeries, butcher shops and grocery stores involved stolen merchandise, and we cannot tolerate the vast explosion of digital theft on the Internet.”²⁷⁹

A “pirate” shows the BBC a thing or two

This is my favourite story of the year so far, from one of my favourite stealth journalists, the enigmatically entitled *enigmax*.

“In late January the BBC confirmed that due to a 25% budget reduction it would be axing 360 jobs by 2013. The cuts, which dig deep into BBC Online, mean that half of this international broadcaster’s websites will not only stop being updated but will disappear forever.”²⁸⁰

“[An anonymous individual] who discovered that the BBC would be deleting the 172 websites... began spidering²⁸¹ them and ripped their content to a VPS server purchased for the bargain price of \$3.99. This seedbox is hosting the content which is all neatly wrapped up in a torrent for anyone to download and share.”

The individual stated that: “The purpose of this project is to show how the entire 172 public facing websites that are earmarked for deletion have been copied, archived, distributed and republished online - independently – for the price of a cup of Starbucks coffee.” The individual did this not only to save the websites, but to “expose the ‘cost savings’ of this proposed exercise as nothing more than a charade to appease the detractors to a strong BBC and to curry favour with the current government.”

²⁷⁷ MPAA: “New Study Finds 23.8% of Global Internet Traffic Involves the Illegal Distribution of Copyrighted Work” January 31 2011

²⁷⁸ Ibid.

²⁷⁹ Ibid.

²⁸⁰ torrentfreak.com: “BitTorrent User and \$4 seedbox saves 172 BBC Websites from Extinction” by enigmax, February 10 2011

²⁸¹ Wikipedia: spidering, or web-crawling, is a process in which bots (web crawlers) “are used to create a copy of all the visited pages on a website for later processing by a search engine that will index the downloaded pages to provide fast searches. Crawlers can also be used for automating maintenance tasks on a Web site, such as checking links or validating HTML code. Also, crawlers can be used to gather specific types of information from Web pages, such as harvesting e-mail addresses...”

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Pirates are unredeemable

According to a survey from PricewaterhouseCoopers “Online video pirates are cheap, stubborn, selfish and totally unreasonable... deluded even.”²⁸²

The survey comes to the conclusion that individuals who are already habituated to piracy form a population group that is unredeemable.

First the earthquake, then the radiation, and now this...

“Sony Corp. suffered a massive breach in its [PlayStation] video game online network that allowed the theft of names, addresses and possibly credit card data belonging to 77 million user accounts, in one of the largest Internet security break-ins ever.”²⁸³

The breach of security took place sometime between April 17th and 19th, but Sony did not inform its customers about the stolen [notice the use of the term *stolen*] data until April 26th, at least a week after the 77 million accounts had been compromised.

“The news sparked fury among users.”²⁸⁴

In further developments, Sony reported the breach to the FBI, while Democrat senator Richard Blumenthal [*really showing those Sony people who was boss*] sent the company a letter asking it to “explain why it didn’t notify” PlayStation [*account*] owners sooner.”²⁸⁵

No word if Sony ever replied to the distinguished representative.

“As problematic as the data breach itself is the extent to which criminals can now use the information gained to launch even more attacks.”²⁸⁶

While the real concern is the sheer amount of information the hackers may have gained from the break-in, including detailed knowledge of Sony’s security protocols and structures, the company’s bungled public relations position did not help matters. In particular, the one week delay in informing the customer base that their credit cards may have been compromised didn’t go down too well, particularly with their western world customers who – unlike most Japanese consumers – don’t mind letting you know how they feel and, particularly in litigious North America, also don’t mind dropping a dime to call their lawyer.

By May 23rd, the cost of the hack had reached about 171 million. Now, that may seem like a lot of money, but to put it in perspective, Sony’s costs resulting from the March earthquake stood at 3.18 billion on the same date.²⁸⁷ Nonetheless, 171 mil is a considerable chunk of change.

²⁸² Reelseo: “Video Pirates are Cheap, Stubborn, and Completely Unreasonable” by Jeremy Scott, February 16 2011

²⁸³ Reuters: “Massive data theft: 77 million users exposed in Sony’s PlayStation security breach” by Tim Kelly and Liana B. Baker, April 27 2011

²⁸⁴ Ibid.

²⁸⁵ Ibid.

²⁸⁶ The Globe and Mail: “Sony data breach fuels privacy concerns” by Omar El Akkad, April 27 2011

²⁸⁷ PC Magazine: “PlayStation Hack to Cost \$171 million; Quake Costs Far Higher” by Mark Hachman, May 23 2011

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America gets tougher with pirates

“New legislation introduced May 12 in the US Senate would target foreign websites dealing in pirated content and goods by preventing them from using America’s Internet infrastructure, including ISPs, search engines and registrars.”²⁸⁸

“Michael O’Leary, EVP of government affairs for the Motion Picture Association of America, said the bill recognizes “the true cost of online content theft.”²⁸⁹

But the consumer rights group Public Knowledge had concerns that the legislation would “alter the landscape of legal protection for Internet use in the name of cracking down on rogue websites... The bill as written can still allow actions against sites that aren’t infringing on copyright if the site is seen to ‘enable or facilitate’ infringement – a definition that is far too broad.”²⁹⁰

²⁸⁸ Home Media Magazine: “New Legislation targets Foreign Websites” by Chris Tribbey, May 12 2011

²⁸⁹ Ibid.

²⁹⁰ Ibid.

CLOUD COMPUTING

The Cloud: a definition

The Cloud, or Cloud Computing, refers to an on-demand provision of computer resources accessed through the internet. You don't have to buy the individual components and don't own them. It is a service.

“Cloud computing refers to the use and access of multiple server-based computational resources via a digital network (WAN, Internet connection using the World Wide Web, etc.). Cloud users may access the server resources using a computer, netbook, pad computer, smart phone, or other device. In cloud computing, applications are provided and managed by the cloud server and data is also stored remotely in the cloud configuration. Users do not download and install applications on their own device or computer; all processing and storage is maintained by the cloud server. The online services may be offered from a cloud provider or by a private organization.

Cloud-based applications and services *[are expected to]* support any type of software application or service in use today”.²⁹¹

We are covering the subject of cloud computing because it will become a critical resource for libraries in the digital age, and in my opinion should be an essential component of any strategic plan for ebook.

In the digital age, libraries must harness the power of the cloud

Again, cloud-based strategies are a critical adaptation which libraries must master; if they do not, their experience may be chiefly characterized by the inability to meet spikes in demand, followed by a loss of patron confidence, and eventually... failure. As I said in the ebook whitepaper, if we do not wish to see the digital tidal wave sweep the libraries away into irrelevance, or change them into an afterthought, the power of the cloud must be harnessed.

In the age to come, systems will count more than ever, highly flexible systems capable of handling sudden spikes in patron demand, rapid upgrades in technology, and the virtually immediate addition of critical new capabilities. Libraries that insist on “owning” in the digital age, “owning” the materials, “owning” the hardware that hosts those materials, “owning” the systems that deliver them, “owning” the ILS and DRM software and so on, will struggle. And those will be the lucky ones. Others will fail altogether. In the digital age, nothing is “owned”, nothing except by the creators of content and innovation. It is not what is “owned” that will count, it will be the ability to scale up or down and shift one's footing, nimbly and rapidly and whenever necessary, that will be the real test, and the real contributor to survival and success.

Cloud computing in 2011

“Cloud computing is now more than just a buzzword... Although many of the advantages of software as a service and the delivery of applications to end users over the Internet are apparent, the applicability of this model to enterprise IT requires careful consideration. Cloud computing enables IT departments to disintermediate themselves from the day-to-day process of providing access to applications, software and platforms, and IT infrastructure; instead, it allows them to focus on aligning supply and demand,

²⁹¹ Wikipedia: search “Cloud Computing”

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and efficiently provision infrastructure in a way that bridges the gap between capex-oriented procurement and opex-oriented consumption [*beginning to feel like you should have gotten that MBA after all? You're not alone.*].²⁹²

Accounting 101

What all the above jargon means is that an organization which fully utilizes cloud-based services can acquire enormous capabilities, including the ability to scale up or down extremely rapidly, without a huge capital investment; instead, since the cloud is a service, it is a pure *expense*, which goes to the profit and loss statement and is immediately 100% tax deductible.

Internal Clouds

Some organizations find that moving immediately to a cloud-based environment is too disruptive, or there is another obstacle (like wanting to own your own ebooks). So they choose instead to recreate the cloud environment internally. An "internal" cloud is a small-scale version of the massive environments provided by such entities as Apple, Google and Amazon. This may be either a temporary or transitional solution on the way to adopting the cloud paradigm, or a permanent objective. Either way, there are risks.

"Managing the balance of supply and demand in these environments is a key challenge. Rather than using old-school capacity management approaches that focus on trend and threshold models, what is required is a new focus on workload placements and resource allocations. In this new model, workload placements dictate the optimal use of capacity..."²⁹³

"This shift in thinking is essential, and getting it wrong can have some dire consequences, including:

Wasting Money – *By erring on the side of safety, many organizations procure too much hardware and run environments at a low level of utilization. Although prudent in the early stages of deployment, this over-provisioning can incur huge cost penalties in the long run, and in scale can cause the construction of entire data centres that are simply not required. Also, internal cloud projects are implicitly competing with external cloud vendors, and direct comparison of the efficiency of the two approaches can be made by end users. This means that a failure to be competitive can spell doom for internal initiatives.*

Operational Risk – *Being overly aggressive with the planning of cloud infrastructure can have even more dire repercussions. At the macro level, the failure to maintain sufficient capacity to buffer new demands can negate the end-user benefit of cloud infrastructure, as new capacity requests go unserved and customers are forced to find other ways to proceed. At the micro level, starving a running application of the resources it needs can incur SLA²⁹⁴ penalties and even cause application outages.*

²⁹² CiRBA Data Center Intelligence: "Analytics for Internal Cloud Management Whitepaper" by Andrew Hillier, 2011

²⁹³ Ibid.

²⁹⁴ Service Level Agreement

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All of these under-provisioning situations can spell doom for cloud initiatives, especially in the early stages, when confidence building is very important."²⁹⁵

So on the one hand, if the library is too conservative, and tries to own everything, or own as much as possible, it can paradoxically get stuck with too much infrastructure some of the time, and not enough infrastructure at others. To paraphrase a point made by Brad Martin, CEO of Random House Canada, who posited this question: why would libraries want to spend money to own a relatively limited number of titles when they can have access to an entire cloud of books?"²⁹⁶

And to end with a point made by Andrew Hillier: "Last but certainly not least, the increase in agility that is made possible by cloud models is essential to the entire cloud value proposition. By consumerizing the access to applications, software platforms and raw infrastructure, and by eliminating hardware procurement lag, end users and lines of business are able to respond much more quickly to emerging demands and trends.

"Rather than requesting infrastructure well in advance of a planned deployment, self-service models allow business groups and application owners to request capacity at any point, and have it available almost immediately and simply pay for what they use."²⁹⁷

"Cloud is the next generation of a company being able to get out of the business of IT and turn IT into an on-demand service, like calling UPS to ship a package instead of having your own trucks," says Joseph Coyle, chief technology officer in North America for Capgemini, the Paris-based global technology and consulting firm."²⁹⁸

In summary, the "cloud" is defined by 5 characteristics

1. On demand self-service – you can take what you need, when you need it, from the cloud
2. Broad network access – you can reach the cloud via a network connection
3. Resource pooling – you can grab not only computing resources but also storage or software from the cloud
4. Rapid elasticity – you have unlimited resources; if you need more power, the cloud will give it to you
5. Measured service – you pay for what you use when you use it"²⁹⁹

There are different kinds of clouds, from public to private to hybrid and more. The hybrid mode is the one really under discussion here. It makes the most sense for libraries which are grappling with the new digital formats. "The biggest use of cloud computing tends to be on the edge of the company, where a business interacts with customers."³⁰⁰

²⁹⁵ CiRBA Data Center Intelligence: "Analytics for Internal Cloud Management Whitepaper" by Andrew Hillier, 2011

²⁹⁶ CLA: "Ebooks in the Libraries," May 27 2011

²⁹⁷ CiRBA Data Center Intelligence: "Analytics for Internal Cloud Management Whitepaper" by Andrew Hillier, 2011

²⁹⁸ Ibid.

²⁹⁹ Wall Street Journal: "Business Outlook is Sunnier with Cloud Computing" by Catherine Bolgar, December 13 2010

³⁰⁰ Ibid.

MUSIC

A lot of people have no sympathy for the record companies

From the aspect of the social engineering of human consciousness in the context of mindshare, the big record companies are hopeless: the architects of their own misfortune. On the one hand, they decry the culture that rips them off so egregiously; on the other, everyone knows that they had a huge hand, unwittingly or not, in creating that culture. For the music studios are not in the music business, not anymore, nor have they been for decades: they are in the *fame* business. Under their sterile stewardship of the past forty-odd years, while their profits crested into the billions upon billions, ninety-nine point nine percent of the musicians on the planet laboured in obscurity and the poverty that goes with it, and *everyone* knows it. Indeed, the average musician's salary is the subject of many a joke. Here's one of them:

I make half my living from music. The other half I don't make.

Rare indeed are those musicians who've managed to eke out a living at the middle class level, and those are usually teaching at least part time. In the modern era, thanks to the studios, there are generally only two pay scales: seven thousand dollars a year and seventy *million* dollars a year. And unless one is blessed with a combination of astounding talent, fashion model good looks, a demonic desire to succeed above all else, and the luck of a lottery winner, one usually ends up in the former category.

Then along came the age of media saturation, in which the studios increasingly trumpeted the fame quotient of the offering, a market strategy which eventually backfired, and horribly. For while the planet was being bombarded by reality shows following the puerile antics of vapid, filthy-rich media stars living lives of opulence worthy of any imperial potentate, the next generation of would-be customers was quietly presented, almost overnight, with another option besides that dished out by the record companies: the world-wide digital file-sharing of music for *nothing*. And so while the entertainment industry was saturating the global consumer base with the aforementioned images of obscene privilege, an entire generation was growing up thinking that music was free; and indeed, a significant percentage of these people have never in their lives paid for music... *and they probably never will.*

And when the industry's magnates finally noticed that their sales had stepped onto a rocket-powered elevator and pushed the down button, their response, back-lit by a halo of almost inconceivable financial inequity, was to admonish generation C kids that downloading was hurting honest, hard-working, everyday folk whose run-of-the-mill jobs at media companies were now in jeopardy.

Apple provided a brief ray of hope, when it proved with iTunes that a significant proportion of the consumer population was quite willing to pay for music if the price was reasonable. But that hope is fading.

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Digital music sales growth is slowing

“The growth in digital music sales is slowing considerably, falling into the single digits for the first time since record companies began making significant amounts of money online in 2004.”³⁰¹

The [IFPI]³⁰² reported that its sales only increased 6% in 2010, a drop-off of 50% from 2009. The current legal digital market is worth approximately 4.6 billion, or about 30% of the industry’s total revenue, while the volume in illegal trade is *20 times* greater.

“Something like 95% of downloads are still unlicensed.”³⁰³

The International Federation of the Phonographic Industry is a dogged opponent of illegal file-swapping [*no kidding – if they weren’t they’d be completely irrelevant*], which it claims is ravaging the world music business. I’d say that if the above figure of 95% is even *half* correct, they are absolutely right. The question is, where are these piracy numbers coming from? I would love to know the methodology used to acquire the data from which the record companies are getting this 95% “illegal downloading” figure. Did they conduct a telephone survey or something? I can hear the script now.

“Hi, this is the music industry. Do you steal from us?”

“Yes I do.”

“Please confirm your complete contact information for verification purposes.”

“Sure. I’ll get right on that.”

“Fighting piracy and expanding the digital market is crucial to make up for declining sales at bricks-and-mortar retailers such as HMV, which earlier this month announced plans to close about 60 of its U.K. stores. Thomas Hesse, the president of Sony Music Entertainment’s global digital business, said the industry was “fighting against the backdrop of the continued decline of CDs, the continued decline of retailers who sell music.”³⁰⁴

New legislation has been passed in Britain, France and South Korea allowing regulators to suspend internet access to “persistent illegal file-sharers”.³⁰⁵ Also, the IFPI has had more luck lately petitioning ISP providers to knuckle down on the cheaters, now that most of those ISPs are in the subscription-based music download business. As stated at the end of the ebook whitepaper, with capitalists, it’s always straightforward. If it generates capital, they’re interested. If it doesn’t, they’re not interested. Well, the ISPs are now interested, so there might be a bit of relief for the music biz there.

³⁰¹ Deseret Morning News: “IFPI: Growth in digital music sales is slowing” by Raphael G. Satter, January 20 2011

³⁰² International Federation of the Phonographic Industry (a title almost as anachronistic as the tolling bell in Shakespeare’s “Julius Caesar”)

³⁰³ Deseret Morning News: “IFPI: Growth in digital music sales is slowing” by Raphael G. Satter, January 20 2011

³⁰⁴ Ibid.

³⁰⁵ Ibid.

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CDs still 74% of sales³⁰⁶

Just in case anyone wondered, the CD hasn't vanished. It's just vanished from the consciousness of the avant garde, which is of course not same thing (though the technophiles and uber-geeks may think so).

74% of American music sales were earned by this format, according to the Recording Industry Assn. of America.³⁰⁷

"CDs aren't doing so bad," board member Tom Silverman said.³⁰⁸

Sony gets into music streaming

Two days after the article outlining Mr. Silverman's assurances, Sony launched "Music Unlimited Powered by Qriocity"³⁰⁹, its new music streaming service, which will provide six million songs on demand through the same cloud-based network used by its 600 million PlayStation customers.

"... Qriocity will offer a monthly subscription music streaming service rather than songs for downloading."³¹⁰

Qriocity features music from all the major labels... and is available. The digital music service is the latest to offer unlimited song streaming for a monthly subscription fee rather than having users download song files to their PCs or phone through stores like iTunes and Amazon.com's MP3 store.³¹¹

For \$3.99, the subscriber gets "a radio-like service which lets them select the music genre or artist..." For \$9.99, users can choose any song they want to listen to.³¹²

The company's next move will be to move Qriocity to the mobile market, and is already offering thousands of movies and TV shows on demand through the network.

Amazon Cloud Player

"Today, with the introduction of Amazon's Cloud Player streaming music service and Cloud Drive file storage service, iTunes seems a little antiquated."³¹³

"Instead of plugging all your devices into one computer to keep them synced, which iTunes requires, Amazon Cloud Player, in conjunction with Cloud Drive, keeps your music stored on its servers, so it's available to any computer or Android device that has an Internet connection."

³⁰⁶ Los Angeles Times: "CDs still 74% of sales in 2010. Long live the CD!" by Alex Pham, February 15 2011

³⁰⁷ Ibid.

³⁰⁸ Ibid.

³⁰⁹ Controller Freak: "Sony turns up the volume on music service" by Yinka Adegoke, February 17 2011

³¹⁰ Ibid.

³¹¹ Ibid.

³¹² Ibid.

³¹³ Digital Life: "Get your music anywhere with Amazon Cloud Player" by Susan Kantra, March 29 2011

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Amazon makes the record companies mad

“The music industry is reportedly furious with Amazon over Cloud Player... The streaming capabilities of Cloud Player is [are] rubbing the music labels the wrong way though, according to *Reuters*. Apparently the labels were informed of Amazon’s new cloud-based music service just last week and Amazon only recently brought up the issue of music licensing.”³¹⁴

“The central issue here is whether it’s illegal for Amazon to provide music streams that users have individually uploaded to the technology company’s servers.”

Another issue would be the storage on Cloud Player of music which is suspected of being illegally obtained. The studios might sue for the right to audit or attempt to obtain a court order to do the same.

Amazon now trying to make amends

Last we heard, Amazon was quietly sitting down at the table with the record companies in an attempt to straighten things out. “Specifically, the *Wall Street Journal* cites a pair of anonymous sources who say Amazon’s actually negotiating deals with the four major labels right now -- though Amazon won’t confirm such a thing -- which the e-tailer hopes to close in a matter of weeks.”

Another source, Yinka Adegoke of Reuters, also reported this story in an April 21st 2011 piece.³¹⁵

Freegal

I occasionally encounter commentary online which is so “pointed” that it is impossible to ignore. Regarding Freegal, with which I have never had any personal interaction, and have had no interaction of any kind since its existence, I will simply bring your attention to a recent post by Sarah Houghton-Jan. Please refer to the footnote,³¹⁶ and I’ll leave it at that.

Apple trumps Google

“Apple Inc. has completed work on an online music storage service and is set to launch it ahead of Google Inc., whose own music efforts have stalled, according to several people familiar with both companies’ plans.”³¹⁷

“Apple’s plans will allow iTunes customers to store their songs on a remote server, and then access them from wherever they have an Internet connection...”³¹⁸

“Apple has yet to sign any new licenses for the service and major music labels are hoping to secure deals before the service is launched.”³¹⁹

No launch date has been set.

³¹⁴ mashable.com: “Will the Music Industry Try to Kill Amazon Cloud Player?” by Ben Parr, March 29 2011

³¹⁵ Reuters: “Apple to beat Google on cloud music storage: sources” by Yinka Adegoke, April 21 2011

³¹⁶ “Just say no to Freegal” by Sarah Houghton-Jan, April 13 2011

³¹⁷ Reuters: “Apple to beat Google on cloud music storage: sources” by Yinka Adegoke, April 21 2011

³¹⁸ Ibid.

³¹⁹ Ibid.

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Psst! Anyone want a record company?

“Len Blavatnik’s Access Industries is buying Warner Music Group Corp., the world’s third-largest recording company, for \$1.3 billion, according to a person familiar with the deal.”³²⁰

“The purchase comes amid a global decline in CD sales that continues to weight down the industry. The buyer will also assume about \$1.9 billion in debt. U.S. recorded music sales are half what they were a little over a decade ago. Digital sales gains have started to flatten and CD sales continue to fall.”³²¹

The company’s plan is apparently job cuts and hopes that “a new wave of innovation will carry digital music sales higher”.³²² This “new wave of innovation” is probably in reference to Google and Apple, both of whom are launching cloud-based music streaming services this year.

Speculation on the future of the music industry

To follow up on my somewhat histrionic opening rant, from early in the second decade of this still-new century, I see a future that may be very different, and perhaps very much better for composers and musicians, and their audiences, and thus for the venerable art of music itself, which is probably at least as old as the Paleolithic cave paintings which date back some 32,000 years.

Much is made of the decline of the music industry, and the decline of CD sales, the failure of digital delivery to make up the gap, and the ravages of piracy (which have been a major contributor to digital’s failure) have all been a source of alarm for everyone involved.

But as Dwayne Winseck points out in his thoughtful blog “Mediamorphosis”, the “music industry”, as we call it, is actually four separate industries:

1. Recorded (physical) music sales
2. Online digital music sales
3. Concerts
4. Publishing

Physical music sales are dropping like a stone, and digital can’t make up the gap, with 95% of it being pirated files (if you believe the stats). The concert business is shaky (we’re unsure why that might be), and publishing is... well, good news:

Worldwide publishing revenues: 2006-2011

\$8.0 billion (2006), \$8.3 billion (2007), \$8.6 billion (2008), \$8.9 billion (2009), \$9.1 billion (2010), \$9.4 billion (2011)³²³

At least it’s keeping up with inflation. But there is one incredible bright spot, at least from an artist/author/musician’s point of view.

³²⁰ AP Los Angeles: “Warner Music being sold for \$1.3 billion” by Ryan Nakashima, May 06 2011

³²¹ Ibid.

³²² Ibid.

³²³ Grabstats.com

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A peek at a possible future

As with ebook and social media, which are already giving authors a great deal more of a say in how their work is marketed (e.g. unbundled versus bundled contracts), digital technology, social media, and incredible advances in computer based studio applications like Cubase (Cubase 6 was recently released) have a huge potential to revolutionize the music business, and give musicians a greater level of control over their own destiny than at any previous point in history.

Glossary of Terms & Acronyms

AACS (Advanced Access Content System)

The copy protection system for high-definition (blue-laser) optical discs.

BitTorrent

A peer-to-peer (P2P) distribution tool which breaks files into small fragments and distributes them throughout a network. The file fragments are reassembled randomly on requesting computers. Each machine uses the quickest connections to the pieces they are still missing while making the pieces they already have available to the rest of the network.³²⁴

Bluetooth

An industry specification for a short-range radio link allowing digital devices such as computers, mobile phones, printers, etc. to connect and exchange information.

CCS (Content Scrambling System)

The copy protection system for standard-definition (red-laser) optical discs.

CDN

Content delivery network.

CE

Consumer Electronics.

Codec

A portmanteau describing a device or program (i.e. MPEG) which encodes a data stream or signal for transmission, storage, or encryption and decodes it for viewing or editing.

CRI Encryption System

An extra security system for optical discs developed by Cryptography Research Inc.

CRTC (a.k.a. CRTTC)

The Canadian Radio-Television and Telecommunications Commission.

DECE

Digital Entertainment Content Ecosystem.

DRM (Digital Rights Management)

A term referring to a technology used to control access to and monitor the use of digital works on behalf of copyright holders. It is sometimes referred to as digital restrictions management.

DMCA

Digital Millennium Copyright Act. U.S. legislation which, in particular, focuses on banning devices which are deliberately designed to circumvent copyright protection.

³²⁴ Wikipedia Encyclopedia, BitTorrent, April 18, 2005

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DVD (Digital Versatile Disc)

Red-laser optical disc technology (the current predominant audiovisual playback and recording format).

DVR

Digital Video Recorder.

EVD (Enhanced Versatile Disc)

EVD, the product of Beijing E-world Technology, is a standard red-laser MPEG-2 based technology which delivers both HD and SD images.

EST

Electronic Sell-Through.

FCC

The United States Federal Communications Commission.

FPR 3D

Film Patterned Retarder technology. Designed to solve the problems of SG (Shutter Glass) technology: “twinkle”, vertigo, and sheer bulk.

Frankendisc

A complicated and uncomfortable combination of unlikely elements to produce a disc with expanded data storage and/or performance capabilities.

Grokster

A P2P file-sharing network found guilty by the U.S. Supreme Court of actively inducing the swapping of copyrighted feature film files.

HD

High Definition.

HD DVD (High Definition Digital Versatile Disc)

A blue-laser optical disc format featuring a 15 GB single-sided or 30 GB double-sided memory capacity. HD DVD was developed by Toshiba and is backward compatible with conventional (red-laser) DVD technology.

HDCP (High-bandwidth Digital Content Protection)

HDCP is a specification developed by Intel Corporation to protect digital entertainment content across the DVI/HDMI interface.

HDMI (High-Definition Multimedia Interface)

HDMI provides an interface between any audio-visual source (i.e. a DVD player) and an audio or audio-visual monitor (i.e. digital television).

HSD

Holographic System Development, usually tagged to produce “HSD Forum”.

HVD (Holographic Versatile Disc)

HVD is an optical disc technology (still in the experimental stage) which utilizes “collinear holographic” technology, in which two lasers – one red and one blue-green - are used in

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combination. HVD has a vastly increased storage capacity (now up to 6 TB/disc) and a much higher ITR (rumoured to someday approach 1 GB/sec) than even blue-laser technology.

ICT (Image Constraint System)

A digital flag within the AACs that determines how Blu-ray and HD DVD players output high definition video signals through the player's outputs.

iHD

iHD is a format developed by Microsoft and Toshiba for providing interactive features for HD DVD, the now-defunct next-generation high definition disc format.

IFPI

International Federation of Phonogram and Videogram Producers.

ISP

Internet Service Provider.

ITR

Information Transfer Rate.

iVOD

Internet Video on Demand, delivered via the internet either on a pay-per-view basis or by online subscription services such as Netflix.

LC

Liquid Crystal, the technology used in 3D "shutter glasses".

LED (light-emitting diode)

"LEDs present many advantages over incandescent light sources including lower energy consumption, longer lifetime, improved robustness, smaller size, faster switching, and greater durability and reliability."³²⁵

MPEG

Moving Pictures Experts Group. This acronym refers any one of 14 current standards of audio/visual compression and transmission (i.e. MPEG-1, MPEG-2 etc.).³²⁶

ODD

Optical Disc Drive.

OEM

Original Equipment Manufacturer.

OTT (Over-the-top)

OTT refers to the delivery of Internet-based multimedia content to the TV over a broadband connection.

³²⁵ Search Wikipedia under LED.

³²⁶ Search Wikipedia under MPEG for technical details on the various and sundry standards.

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P2P Network

A peer-to-peer computer network.

SEO

Search Engine Optimization (a process which improves the visibility of a website).

SD

Standard Definition.

SD Card

Secure Digital Card.

SG 3D

3D technology which uses Liquid Crystal (LC) glass to display the left and right image alternately. "When the projector displays the left eye image, the glasses block the right eyes image, and vice versa."³²⁷

SPDC

The Self-Protecting Digital Content system, incorporated into Blu-ray to enhance the AACS copy-protection system, verifies the integrity of the disc and the hardware before playback.

Sub(s)

Subscription(s).

UDF (Universal Disc Format)

UDF is a format specification of a file system for storing files on optical media.

UHD

Ultra High Definition.

UMD

The Universal Media Disc (UMD) is an optical disc medium developed by Sony for use on the PlayStation Portable. It can hold 1.8 gigabytes of data, which can include games, movies, music, or a combination thereof.

USTR

The United States Trade Representative, an office of the U.S. Government responsible – among other things – for evaluating various trading partners.

VOD

Video on Demand: commonly delivered by cable providers.

VMD (Versatile Multilayer Disc)

A multi-layered optical disc format of European origin, VMD offers increased storage capacity and is adaptable to both red- and blue-laser technologies.

WAN

Wide Area Network.

³²⁷ Wikipedia – subject heading “FPR (Film Patterned Retarder)”

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WIPO

World Intellectual Property Organization.

WIPO Copyright Treaty

An international treaty on copyright law adopted by the WIPO member states in 1996, it provides additional copyright protections which account for recent advances in information technology.³²⁸

³²⁸ Wikipedia – search “WIPO Copyright Treaty”