

2004: The Turning Point

*An overview of some of the issues
that will change the way we use the Internet*

By Stephen Downes

I am usually hesitant to write predictions of the future, not because I think it's risky (I have a great deal of confidence in what follows) but because it's hackneyed. Especially at this time of the year, everybody is making predictions, which makes just another projection about as run of the mill as an article can get.

But there is a collective veil sweeping, it seems, across the foresight of a wide variety of columnists. Perhaps they are lured by what they think the markets will do, or by corporate press releases. Perhaps it's all a semi-informed groupthink. It's as though the wonderment had been drained from their collective souls, replaced by some sort of machine-parts analysis.

In what follows I base my projections not on stock prices, sales trends or focus group analysis. I base it on what I think -- on what I *feel*, in the classic sense of the Idoru -- is driving the hearts of those who will make the final decisions on the future of the Internet, those who use it.

Email Redux

One way or another, the deluge of spam will be resolved in the near future. The most likely outcome is that the email protocol will be replaced with a more restrictive system in which the sender's address, if not identity, will be authenticated. Kill one spam message and all subsequent email from that sender will be blocked.

In the interim, much heat (and little light) will be generated surrounding anti-spam legislation. It will become apparent that the legislation passed has been, in essence, the legalization of spam. Based on this, it

will not be surprising to see marketing agencies take to the courts to block the deployment of authenticated email, on the grounds that it makes their now legal mass mailings unprofitable.

A Population in Search of a Community

The evolution of email will have as an unexpected consequence a resurgence in the widespread search for community on the Internet. Historically, the most popular applications have always been those where people could share their thoughts in groups. Usenet dominated the early days of the Net, email and mailing lists the 1990s, Web-based discussion boards the last decade. Because community forums have been so corrupted by commercial content, people have found themselves cut off from their communities.

This phenomenon has emerged largely unremarked (I haven't seen a reference anywhere). But I have a sense that people, if they think about it, will discover that they haven't been reading their email so diligently nor visiting the online discussions so frequently. I have sensed a drop in the number and frequency of posts in the lists that I monitor. So where are these people going?

One answer, of course, is the blog. The rise of half a million personal journals in just a couple of years shows, if nothing else, a yearning to communicate. But blogging has already peaked, and over the next year we will see more signs of its regression. Despite blogrolls, comment forms, trackbacks and more (all of which are showing early signs of spam pollution), blogging is essentially an individual activity, not a participation in a group.

This mass of people will be cast adrift once again, searching for a way to form a group. There won't be a single magic bullet application that meets this need. But a suite of tools, ensuring bloggers not only the capacity to write, but also the chance to be heard, will begin to evolve through the new year. Part of this will have to do with the email redux, which will allow readers to select their sources. The other part will have to do with effective personalization.

Blogging Without Writing

One tenth of one percent of the people write publicly. Well, OK, I can't validate this figure, but it has been a rule of thumb for me for about a decade. If you have a thousand readers on your Website, one person will post regularly to the discussion board. If you have a thousand mailing list subscribers, one person will post the bulk of the messages. If you have a thousand Internet users, one person will create (and maintain) a blog (people may observe that two percent of Internet users currently blog, but I see this as an indication of the scale of the coming shrinkage of the blog community).

Most people, therefore, will not write, thus robbing the Internet community of a valuable resource. The views and opinions of these people constitute a font of information. We have only been able to capture that information indirectly: we track the number of hits on a Web page, we track individual browsers with cookies and Web bugs. Tools like the Google bar and Alexa try to capture and report personal Internet usage.

Right now, spyware has a bad reputation, and deservedly so, as the results disappear into some corporate vault, only to later haunt you in the form of vaguely targeted spam. But if the results didn't disappear? What if you could control these results, wearing different profiles for different browsing routines, clicking on an evaluation as you read, adding a comment or annotation if you felt like it, capturing and collecting your own personal library as you went along? Not a blog, because a blog is about writing, but a way of communicating what you think is important.

The early indications are already out there, and in the next 12 months we should be watching for some form of non-blog blogging to emerge.

Personalization Finally Works

Very few people select a wardrobe composed entirely of clothing made by one company, but that's the model personalization has attempted to emulate in the past. It's as though Armani had defined personalization as the act of showing you only clothes in your size. More useful than it was, certainly, but the providers of personalization have been left scratching their heads wondering why people didn't flock to their wares.

Personalization is about choice, and so not surprisingly efforts to personalize within an environment of restricted choice have not been successful. Even technologies that are forward looking such as RSS have followed thus far the brand-first approach to feed reading. You subscribe to Wired News, or CNet, or Instapundit, and put up with a certain amount of annoying off-topic content to get the stuff you want. But all that's about to change with the advent of topic-based (or geography based, or affinity based) mixed feeds.

The year 2004 could be the year that personalization of the Web finally succeeds (it will definitely make a mark, but it could be a few years before it reaches the mainstream). By combining the information provided by non-blog blogging with tailored feeds drawing resources from hundreds or thousands of sources, readers will be able to be presented exactly what they want. Into this same environment will be piped whatever replaces email, so that all a person's essential Web reading (and very little non-essential Web reading) will be available through a single application.

This isn't, of course, personalization the way it was pushed in the late '90s, where the idea was that advertisers would be able to push exactly the content you wanted -- or they wanted (this was never clear). It's something very different, and commercialization will be a greater challenge -- but offer, when it finally succeeds, much greater payoff.

Learning Objects at Last

Much has been made, in some circles at least, of the potential of learning objects. Vast sums of money have been spent on learning management systems that emulate the functionality of those great (and now extinct) e-commerce systems of the '90s. The next result has been e-learning, largely regarded as irrelevant and boring, and while it may be true that students in an authoritarian environment may be forced to learn this way, there is no great enthusiasm, at least, not after the initial pleasure of escaping even more boring lectures has worn off.

For all that, learning objects will gain importance in 2004 or shortly thereafter, but not as cogs in a centrally packaged learning design. Learning objects -- or, as some will start calling them, learning resources -- will begin to reach their potential outside the mainstream. When people who use informal learning -- as much as

90 percent of learning, according to some estimates -- the demand, and therefore the production, of learning objects will increase dramatically.

Much to the displeasure of those who invested in such content technologies, the vast majority of learning resources will be free, and the Internet will be an increasingly viable alternative to a traditional education. Good thing, because funding patterns for traditional education will not change: tuition will rise, classes will be cut, and the minute independent certification becomes widespread (could be 2004, but probably later) the educational system will enter a full-scale crisis from which it will not recover.

New Hype: Simulations

Smart people have realized by now that the future of commercial content lies in higher end production that cannot be emulated by a 16-year-old with a computer and an attitude. This is why the music industry has turned to music videos as its salvation, the commercial audio track being almost a thing of the past, and this is why the people who consult for the industry have been embracing simulations in a big way.

What's more, simulations have legs. They provide a compelling alternative to traditional content delivery because they engage the learner. A simulation is not just some scripted presentation of instructional material; it is a representation of that material in a manner that places the learner within a context in which the learning would be used. Simulations, therefore, will be hyped like crazy for the next couple of years -- just long enough to the aforementioned 16-year-old to get his hands on sophisticated simulation authoring tools and, with his enthusiasm, imagination and lack of restraint, put the content publishers to shame.

Attacking Open Content

The defining issue of 2004 will be open content, and more importantly, the launch of the most aggressive attacks yet on the emergence of open content. The real threat facing the content industry (including music, video, text, software and education) is not content piracy, it is the availability of high quality free content distributed in competition with the commercial product.

The best evidence of this is in the news media, mostly because newspapers offer a technically low-end product. Even newspapers that are *not* being pirated on the Web (and that's most of them) are suffering from the impact of online competition. MIT's Open CourseWare project instantly vaporized dozens of business plans. Wikipedia has more readers -- and, these days, more clout -- than Britannica. Linux is being seen more widely as an alternative to Windows. Open access journals are forcing publishers to retrench. The list goes on.

The attack on open content is intended to drive it from the marketplace. Part of this is legislative -- with a widening copyright and patent regime, some open content is simply being declared illegal (which is why we see corporate support for even the most absurd patents). Part of this is promotional -- a system-wide advertising campaign aimed at executives is stressing the risks of open content, both in terms of legality and reliability. And part of this is strategic -- corporate alliances are forming to create closed content markets on the desktop, for example.

This is a last desperate gasp before the bottom falls out of the content industry completely. Wise investors are already noting the acquisitions of publishers and music labels. Content is well on its way to being a value-add, something that you might attach to a product, but not something that *is* the product. Apple uses music to sell iPods, not iPods to sell music.

IP Communications, Finally

Finally, a little out of leftfield, comes another revolution sweeping the Web: IP communications. This may sound odd, as the Internet just *is* IP (Internet Protocol) communication, but in fact we have been using alternative systems -- such as the telephone, television, and even the post office -- much more frequently. That's all about to change.

The biggest fuss will be made about voice over IP (VOIP), but this is just one aspect of the consolidation of communications technologies. Television -- especially live television, such as sports coverage -- is on the verge of being replaced (and just in time, too, as systems like TiVo kill the advertising market). The year 2004 is the hype year for this technology -- 2005 is the year consumers rebel, as they realize they are being charged analog prices for digital technologies, and that cheaper (or free) alternatives are available.

The dark horse in all of this is the resurgence of videoconferencing. The old, unreliable (and expensive) systems will be phased out over the next few years in favour of IP videoconferencing. Combine this with large flat screen displays (still too expensive to justify the hype they will get, but looming large in the corporate market) and you have a much more compelling experience than you can imagine.

2004, in Retrospect

The year 2004 will be looked on as the year in which everything changed, but nothing changed. We will cross some significant barriers in 2004, but the changes that emerge from this turbulent, uncertain year will take several more years to mature. When we look back, we will see that 2004 was a lot like, say, 1996 -- the new infrastructure will be in place, but the massive discovery will not yet have taken hold, and the skeptics more often than not will appear to be holding the ground. Don't be fooled by this.

Stephen Downes (<http://www.downes.ca/>) is a Senior Researcher for the National Research Council Canada in Moncton, New Brunswick, Canada.

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