Before I begin this talk, which was penned to paper during my flight last night, and obviously before seeing what looks to be a serious humanitarian crisis in Myanmar this morning – I can only say we are all sensitive to the need there and hope that aid reaches those who need it quickly.

What an amazing time to be in the P2P industry. There are rare moments in technology when every trend aligns in support of some new concept or idea. I could cite a few examples from the Personal Computer, to online media, and even to the early days of content delivery networks. And now the perfect storm that will finish the job started by Intervu, Sandpiper and Akamai is upon us. From a tidal wave of consumer demand for online media, to the 800mb low pressure center of a looming recession and credit crunch, the time to make money from online video is now and in pushing content delivery to the very edge of the network lies a force as natural as gravity. As steadily, other barriers that might foil this industry are being lifted, the storm fronts are coming together. Now my metaphor is not intended to be a destructive one (instead the act of creation is what makes technology so compelling), but rather it should conjure up images of raw power, as all such revolutions unleash immense power that reshape any landscape that comes in contact with it. The trends are there, the natural forces are coming together, seasoned executives and engineers from all manner of business are being drawn to the opportunity, and the time to execute is now.

Of course, the warm water underneath this cyclone, powering its advance, fueling its growth is the engineer. That vibrant and collaborative community of developers, working silently on some idea and bringing new things to life. It's this developer community, especially the Bittorrent developer community, that I'd like to focus on for just a moment.

Bittorrent, the protocol, for those of you who don't know the story, was invented in 2001 by our co-founder, Bram Cohen. And some day there will probably be a great talk about the reasons it became popular – but today, let's fast forward by saying "it became popular" to the point that bittorrent protocol today represents substantial percentage points of overall Internet traffic. The ideas and technology let loose back then have driven some interesting market developments, inspired some wonderful research, challenged some network operators, anchored some innovative business models, enabled some voices to be heard…. thrilled and amazed countless consumers. Of this, evidence exists even in our own vocabulary, where words like tracker and swarm are commonly applied.

But more than the powerful idea, this overwhelming success represents the capabilities of the Bittorrent community and the strength of collaborative development. That through this vibrant community, there are now over 60 bittorrent clients in the market, users have unprecedented choice in applications. And as the protocol continues to evolve, this developer collaboration remains an important driving force.

Towards this end, Bittorrent.org is a forum of developers and other participants that have taken on the mission to shepherd the protocol through a landscape that is ever changing. The process of extending the protocol at bittorrent.org is lightweight and open. It's modeled after the Python Extension Process, and would look familiar if there are any python developers out there. It's also fairly silent, in fact, for most of you this might be all you ever hear of it. PR and Marketing are non-existent, just developers and engineers, solving problems.

Discussions there range from core extensions to the protocol itself, to new adjacent services that make BitTorrent perform better overall. These developers frequently call on outside participation, when addressing needs outside of core P2P development. Upcoming work at bittorrent.org will soon include proposed services like cache discovery, and any other ideas that can be implemented across the larger bittorrent client landscape. As representative ideas, bittorrent.org remains the most effective means to drive change and innovation across the broadest set of bittorrent developers and implementations.

But I should mention, the overriding concern throughout this community is one of end-user performance. Those who would change the architecture must provide compelling and real evidence that such changes will be in the interests of users. As any misstep will drain energy from the storm, though anyone with prime beachfront real estate on the shore of some legacy business would surely see this come to pass (instead of buying property on the new beach).

But rest assured, users WILL notice and thus the storm finds its own strength. With the energy of over 60 clients in the marketplace, representing an abundance of consumer choice, performance is paramount. And even at BitTorrent Inc., which has been blessed with satisfied consumers all around the world and a worldwide distribution of over 170M clients, performance - is - paramount. Whether among clients or among ISPs, this performance is the energy of the mass market consumer with a voice that will be heard.

So the proper care is required, when considering anything that might impair the performance of the users.

I was recently contacted by a reporter who was having trouble using uTorrent on his ISP. A familiar story it seemed at first, he was getting slow performance over something that once worked very well. Of course, he was naturally curious, perhaps even concerned about this and gave tech support a call. Coming away from that with no good answers (but yet another great story), as soon as he identified himself as a reporter, this person was given the following explanation from their CTO. "Oh no, we don't block bittorrent" said the man "But we do isolate it to our network, when possible". Now, I'm sure this person believes he might be helping performance, he's certainly motivated by saving money (who isn't) and both are noble business pursuits, don't get me wrong. But when those pursuits as implemented begin to degrade performance (as in this case), performance, this thing that is always noticed, then energy finds an outlet.

So instead of re-architecting an application around a new set of objectives (unilaterally in this case), isn't it better to maintain the elements of an application that have already proven popular to conserve the energy that's already there, and solve other objectives, like network management, in an application independent manner? This is the very reason we've put our name alongside Comcast as they boldly move exactly in this direction, a protocol agnostic approach to network management, a solution that preserves this independence of network and application… a direction that provides the greatest degree of flexibility for future innovation at the edge, and still preserves a managed commons, thus averting tragedy.

I'll conclude by saying, for these developers, this community, the burden of proof will always be on one who would change the architecture, to convince these developers that the application performance will be preserved that the storm will gain, not lose, strength. Because for us, this community of bittorrent developers, the proper care is required in protecting the interests of our users. At bittorrent.org, many ideas bear this burden easily, like caching and cache discovery, and through these mechanisms, we are assured a future full of new ideas.

And if you are looking to shape the future world of bittorrent and peer to peer generally, there is no better place to capture the attention and imagination of the engineer, that warm water fueling the next storm of ideas.

Many problems are yet to be solved, lest the perfect storm become a mere tropical depression, and perhaps in the process cements my reputation as the alarmist weatherman. So join us there, as we look to make a better world. And as we have seen, an impassioned developer community collaborating together can indeed change the world --

Thank you.