

Saving the Net: How to Keep the Carriers from Flushing the Net Down the Tubes

By [Doc Searls](#) on Wed, 2005-11-16 02:00

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We're hearing tales of two scenarios--one pessimistic, one optimistic--for the future of the [Net](#). If the paranoids are right, the Net's toast. If they're not, it will be because we fought to save it, perhaps in a new way we haven't talked about before. Davids, meet your Goliaths. This is a long essay. There is, however, no limit to how long I could have made it. The subjects covered here are no less enormous than the Net and its future. Even optimists agree that the Net's future as a free and open environment for business and culture is facing many threats. We can't begin to cover them all or cover all the ways we can fight them. I believe, however, that there is one sure way to fight all of these threats at once, and without doing it the bad guys will win. That's what this essay is about.

Here's a brief outline of the article. If you want to go straight to the solution, skip to the third section:

- Scenario I: The Carriers Win
- Scenario II: The Public Workaround
- Scenario III: Fight with Words and Not Just Deeds

Scenario I: The Carriers Win

Be afraid. Be very afraid. --Kevin Werbach.

Are you ready to see the Net privatized from the bottom to the top? Are you ready to see the Net's free and open marketplace sucked into a pit of pipes built and fitted by the phone and cable companies and run according to rules lobbied by the carrier and content industries?

Do you believe a free and open market should be "Your choice of walled garden" or "Your choice of silo"? That's what the big carrier and content companies believe. That's why they're getting ready to fence off the frontiers.

And we're **not stopping** it.

With the **purchase** and re-animation of **AT&T**'s remains, the collection of former Baby Bells called **SBC** will become the largest communications company in the US--the new Ma Bell. **Verizon**, comprised of the old GTE plus MCI and the Baby Bells SBC didn't grab, is the new Pa Bell. That's one side of the battlefield, called The Regulatory Environment. Across the battlefield from Ma and Pa Bell are the cable and entertainment giants: Comcast, Cox, TimeWarner and **so on**. Covering the battle are the business and tech media, which love a good fight.

The problem is that **all** of these battling companies--plus the regulators--hate the Net.

Maybe hate is too strong of a word. The thing is, they're hostile to it, because they don't get it. Worse, they only get it in one very literal way. See, to the carriers and their regulators, the Net isn't **a world, a frontier, a marketplace** or a **commons**. To them, the Net is a collection of pipes. Their goal is to beat the other pipe-owners. To do that, they want to sell access and charge for traffic.

There's nothing wrong with being in the bandwidth business, of course. But some of these big boys want to go farther with it. They don't see themselves as a public utility selling a pure base-level service, such as water or electricity (which is what they are, by the way, in respect to the Net). They see themselves as a source of many additional value-adds, inside the pipes. They see opportunities to sell solutions to industries that rely on the Net--especially their natural partner, the content industry.

They see a problem with freeloaders. On the tall end of the power curve, those 'loaders are AOL, Google, Microsoft, Yahoo and other large sources of the container cargo we call "content". Out on the **long tail**, the freeloaders are you and me. The big 'loaders have been getting a free ride for too long and are going to need to pay. The Information Highway isn't the freaking interstate. It's a system of private roads that needs to start charging tolls. As for the small 'loaders, it hardly matters

that they're a boundless source of invention, innovation, vitality and new business. To the carriers, we're all still just "consumers". And we always will be.

"Piracy" is a bigger issue to the cargo sources than to the carriers. To the carriers, "fighting piracy" is a service offering as well as a lever on regulators to give carriers more control of the pipes. "You want us to help you fight piracy?", the transport companies say to the content companies. "Okay, let's deal." And everybody else's freedoms--to invent, to innovate, to do business, to take advantage of free markets and to make **free culture**--get dealt away.

The carriers have been lobbying Congress for control of the Net since Bush the Elder was in office. Once they get what they want, they'll put up the toll booths, the truck scales, the customs checkpoints--all in a fresh new regulatory environment that formalizes the container cargo business we call packet transport. This new environment will be built to benefit the carriers and nobody else. The "consumers"? Oh ya, sure: they'll benefit too, by having "access" to all the good things that carriers ship them from content providers. Is there anything else? No.

Crocodile grins began to grow on the faces of carriers as soon as it became clear that everything we call "media" eventually would flow through their pipes. All that stuff we used to call TV, radio, newspapers and magazines will just be "content" moving through the transport layer of the pipe system they own and control. Think it's a cool thing that TV channels are going away? So do the carriers. The future *à la carte* business of media will depend on one medium alone: the Net. And the Net is going to be theirs.

The Net's genie, which granted all those e-commerce wishes over the past ten years, won't just get shoved back in the bottle. No, that genie will be piped and priced by the packet. The owners of those pipes have a duty to their stockholders to make the most of the privileged position they've been waiting to claim ever since they got blind-sided, back in the 80s and 90s. (For an excellent history of how the European PTTs got snookered by the Net and the Web, see Paul F. Kunz' **Bringing the World Wide Web to America**.) They have assets to leverage, dammit, and now they can.

Does it matter that countless markets flourish in the wide spaces opened by agreements and protocols that thrive at the grace of carriage? Or that those markets are threatened by new limits, protections and costs imposed at the pipe level?

No.

Thus, the Era of Net Facilitation will end. The choke points are in the pipes, the permission is coming from the lawmakers and regulators, and the choking will be done. No more free rides, folks. Time to pay. It's

called creating scarcity and charging for it. The Information Age may be here, but the Industrial Age is hardly over. In fact, there is no sign it will ever end.

The carriers are going to lobby for the laws and regulations they need, and they're going to do the deals they need to do. The new system will be theirs, not ours. **The NEA principle**--Nobody owns it, Everybody can use it, Anybody can improve it--so familiar to the **Free Software** and **Open Source** communities will prove to be a temporary ideal, a geek conceit. Code is not **Law**. Culture is not **Free**. From the Big Boys' perspective, code and culture are stuff nobody cares about.

That's us: Nobody.

The new carrier-based Net will work in the same asymmetrical few-to-many, top-down pyramidal way made familiar by TV, radio, newspapers, books, magazines and other Industrial Age media now being sucked into Information Age pipes. Movement still will go from producers to consumers, just like it always did. Meet the new boss, same as the old boss. Literally.

The deals that matter will be done between tops of pyramids. Hey, it's easier to do business with the concentrated few than the dispersed many. **The Long Tail** can **whip** itself into a frenzy, but all the tech magazines and blogs in the world are no match for the **tails** and **teeth** of these old sharks. (Hey, Long Tailer, when's the last time you treated your erected representatives to private movie screenings, drafted their legislation, ghosted their committee reports, made a blockbuster movie or rolled fiber across oceans?)

Google and Yahoo and Amazon and eBay and e-commerce and free software and open source and blogging and podcasting and all the rest of that idealistic junk have had their decade in the sun. Hell, throw in Apple and Microsoft, too. Who cares? *Them?* Doesn't matter how big they are. They don't matter. They're late to the game.

We all know the content business got clobbered by this peer-to-peer crap. But the carriers took a bath by building out the Net's piped infrastructure. They sank \$billions by the dozen into fiber and copper and routers and trunks, waiting for the day when they'd be in a position to control the new beast fleshed on the skeleton that *they* built.

That Day Has Come.

It came earlier this month, when the November 7, 2005, issue of ***BusinessWeek*** hit the Web's streets. In that issue are "Rewired and Ready for Combat" and "**At SBC, It's All About 'Scale and Scope'**", which features an interview with Edward Whiteacre, CEO of **SBC**. Here's the gist of it:

How concerned are you about Internet upstarts like Google (GOOG), MSN, Vonage, and others?

How do you think they're going to get to customers? Through a broadband pipe. Cable companies have them. We have them. Now what they would like to do is use my pipes free, but I ain't going to let them do that because we have spent this capital and we have to have a return on it. So there's going to have to be some mechanism for these people who use these pipes to pay for the portion they're using. Why should they be allowed to use my pipes?

The Internet can't be free in that sense, because we and the cable companies have made an investment and for a Google or Yahoo! (YHOO) or Vonage or anybody to expect to use these pipes [for] free is nuts!

What's your approach to regulation? Explain, for example, the difference between you and Verizon in how you are approaching regulatory approval for Telco TV [digital-TV service offered by telecoms].

The cable companies have an agreement with the cities: They pay a percentage of their revenue for a franchise right to broadcast TV. We have a franchise in every city we operate in based on providing telephone service.

Now, all of a sudden, without any additional payment, the cable companies are putting telephone communication down their pipes and we're putting TV signals. If you want us to get a franchise agreement for TV, then let's make the cable companies get a franchise for telephony.

If cable can put telephone down their existing franchise I should be able to put TV down my franchise. It's kind of a "what's fair is fair" deal. I think it's just common sense.

What if the regulators don't agree?

Then there won't be any competition--there will be a cable-TV monopoly.

I know you're a competitive person. Who are your biggest competitors?

Our big competition in the future is with the cable companies. Verizon's going to be a player, and certainly I want to compete. And I want our shareowners to do better than anyone else.

If I were *BusinessWeek*, I'd ask:

What about the free and open marketplace that has grown on the Net itself? Do you have any interest in continuing to support that? Or in lobbying forms of deregulation that foster it? Or are you just in a holy war with the cable companies inside the same old regulatory environment you've known since forever?

I'd ask:

If you were to buy, say, Level 3, would you start to filter and restrict content at the transport level, to extract the profits you want, without regard for other market consequences? Would Cisco, builder of the great Firewall of China, help out?

I'd ask:

Which do you prefer: The regulatory environment where your business has adapted itself for more than a century, or a completely free and open marketplace like the rest of us enjoy sitting on top of your pipes?

Whiteacre's answers, of course, would be less relevant than the obvious vector of his company's intentions. For a summary of that, let's return to **Lauren Weinstein of People for Internet Responsibility**:

Of course, the truth of the matter is that the telcos have been moving rapidly through massive consolidation--and a range of other tactics--to create an environment where "competition" will only be a pale reflection of what we were originally promised, with only a few gigantic players in control of all telecom resources and policies. Like the robot cop in *Terminator 2* that reformed from blown-apart mercurial blobs of metal, the "golden age" of telecom competition is already giving way to empire. Don't blame *BusinessWeek* for not asking the important questions or for missing the Carriers vs. Net story. Biz pubs love to cover **vendor sports**. And there's certainly a big story here.

Great distraction, vendor sports. While we're busy watching phone and cable giants fight over a closed battlefield that ought to be open, we miss Net-hostile moves by other parties that result in other lost freedoms.

Take **ICANN**, for instance, where a new **.com Registry Agreement** allows Verisign to **raise the rates** for .com names by 7% annually, *and* to operate .com in perpetuity, *and* to "mak[e] commercial use of, or collect, traffic data regarding domain names or non-existent domain names", *and* to reap other rewards for what few other than Verisign would agree is a good job. **Bret Faucett summarizes** the darkest shadow across the *noir* scenario we've already described:

The theme running through all of these is that ICANN and Verisign are treating the .COM registry as a private resource. It's not. The root

servers and TLD servers are public resources. We should treat them like that.

Bret has one of the most eloquent voices in the wilderness of clues the Big Boys would rather avoid. So does **Susan Crawford**, who was just, perhaps miraculously, named to the ICANN board.

For Bret, Susan and the rest of the restless natives of this new world, what matters most is **Saving the Net**--keeping it a free and open *marketplace* for *everybody*--while also making sure that carriers of all kinds can compete and succeed while providing much of the infrastructure on which that marketplace resides. That means we need to **understand the Net as more** than a bunch of pipes and business on the Net as more than transporting and selling "content".

This isn't a trivial issue. It's a matter of life and death for the Net itself. How are we going to fight?

Read on.

Scenario II: The Public Workaround

The deathblow comes from the muni Wi-Fi efforts. It doesn't matter whether they are viable or not--all they need do is give local connectivity the moral high ground and represent a grass roots effort that the legislature not only can't ignore but can embrace. --Bob Frankston

In ancient telco lingo, "bypass" is anything that works around the phone system itself. **Susan Crawford wisely encourages** bypassing not only the system but the whole notion of fixing it with "Network Neutrality" agreements or legislation. In response to the questions, "What, if any, version of common carriage rules should govern Internet communications platforms? More specifically, can some concept of Network Neutrality be defined and enforced proactively in the form of prescriptive regulations?", she answers,

I think this is the wrong question. It assumes the limited world of online access providers we've got, makes them into "communications platforms," and then suggests we need to make rules about them. Not very imaginative. I have lost faith in our ability to write about code in words, and I'm confident that any attempt at writing down network neutrality will be so qualified, gutted, eviscerated, and emptied that it will end up being worse than useless. Besides, I'm sure there are very good reasons to manage networks, and writing down the difference between management and incremental control of users' experiences is an impossible task.

The only way around this issue is to avoid it by encouraging the development of alternative online access methods, and being careful not to let the incumbents call them illegal. Let the dinosaurs huddle together in the snow, controlling and commoditizing to their hearts' content. We're made of better stuff. It should be no more illegal to have an open wireless network in your house than to practice the piano with the windows open. And having an open wireless network can lead to a community mesh network and a host of devices that open immediately to others, connecting us to the world.

If that's not possible, then the second best solution is structural separation, paying off the carriers for their stranded costs and moving to open utility platforms. BT seems to think that's a fine idea; why couldn't it work here?

Muni Wi-Fi is a form of bypass. So are other government-sponsored or assisted workarounds.

So are the private ones. If Om Malik and *Business 2.0* are sniffing the right trail, that's what we'll get from Google. Here's what Om said on August 25, 2005, in **"Free Wi-Fi? Get Ready for GoogleNet"**:

What if Google wanted to give **Wi-Fi** access to everyone in America? And what if it had technology capable of targeting advertising to a user's precise location? The gatekeeper of the world's information could become one of the globe's biggest **Internet** providers and one of its most powerful ad sellers, basically supplanting **telecoms** in one fell swoop. Sounds crazy, but how might Google go about it?

First it would build a national **broadband** network--let's call it the GoogleNet--massive enough to rival even the country's biggest Internet service providers. *Business 2.0* has learned from telecom insiders that Google is already building such a network, though ostensibly for many reasons. For the past year, it has quietly been shopping for miles and miles of "dark", or unused, fiber-optic cable across the country from wholesalers such as New York's AboveNet. It's also acquiring superfast connections from Cogent Communications and WITel, among others, between East Coast cities including Atlanta, Miami, and New York. Such large-scale purchases are unprecedented for an Internet company, but Google's timing is impeccable. The rash of telecom **bankruptcies** has freed up a ton of bargain-priced capacity, which Google needs as it prepares to unleash a flood of new, bandwidth-hungry applications. These offerings could include everything from a digital-video database to on-demand **television** programming.

One contact in a Position to Know tells me that Google's purpose isn't bypass, but advertising. That's their revenue model, and if you follow the money--as well as the company's **development** and **acquisition** vectors--you get to a place where highly targeted advertising pays for everything. Should this be a problem? There are damn few large companies taking the Net's side here. If Google gets to be a major carrier as well as the major search engine and advertising pump it is today, that sure as hell beats the alternatives. Especially when Google is fighting the incumbents on the battlefield we call Congress.

For example, there's an **Internet regulation bill** working its way through the House of Representatives right now as part of a broad effort to replace the **Telecommunications Act of 1996**, which pretty much everybody agrees is in woeful need of an upgrade. Naturally, lawmakers and the lobbyists who employ them want *more laws, more regulation, more favoritism*. So, **Brett Glass points out**, "like earlier versions, it subjects all ISPs and VoIP providers to intensive Federal regulation and requires them to register before providing service. It also preempts state and local control over rights of way".

Google isn't merely against bills like this, it's opposing them publicly. **Vint Cerf**, Google's Chief Internet Evangelist, sent **an open letter** this past Wednesday to the Energy and Commerce Committee, speaking out against this bill and others like it. The key paragraphs:

The remarkable social impact and economic success of the Internet is in many ways directly attributable to the architectural characteristics that were part of its design. The Internet was designed with no gatekeepers over new content or services. The Internet is based on a layered, end-

to-end model that allows people at each level of the network to innovate free of any central control. By placing intelligence at the edges rather than control in the middle of the network, the Internet has created a platform for innovation. This has led to an explosion of offerings--from VOIP to 802.11x wi-fi to blogging--that might never have evolved had central control of the network been required by design.

My fear is that, as written, this bill would do great damage to the Internet as we know it. Enshrining a rule that broadly permits network operators to discriminate in favor of certain kinds of services and to potentially interfere with others would place broadband operators in control of online activity. Allowing broadband providers to segment their IP offerings and reserve huge amounts of bandwidth for their own services will not give consumers the broadband Internet our country and economy need. Many people will have little or no choice among broadband operators for the foreseeable future, implying that such operators will have the power to exercise a great deal of control over any applications placed on the network.

As we move to a broadband environment and eliminate century-old non-discrimination requirements, a lightweight but enforceable neutrality rule is needed to ensure that the Internet continues to thrive. Telephone companies cannot tell consumers who they can call; network operators should not dictate what people can do online.

I am confident that we can build a broadband system that allows users to decide what websites they want to see and what applications they want to use--and that also guarantees high quality service and network security. That network model has and can continue to provide economic benefits to innovators and consumers--and to the broadband operators who will reap the rewards for providing access to such a valued network.

We appreciate the efforts in your current draft to create at least a starting point for net neutrality principles. Google looks forward to working with you and your staff to draft a bill that will maintain the revolutionary potential of the broadband Internet.

Significantly, Vint Cerf, often called "The father of the Net", is the prime author of TCP/IP, the core protocol suite that the Net itself employs.

Bills such as this one travel through a pro-market Congress on the strength of "deregulation" claims by carriers, which are made on television as well as in the halls of Congressional office buildings. As **Lauren Weinstein** reports:

the telephone companies' alliance has again been flooding the airwaves with "unleash the phone companies" advertising. These follow their usual line: We see happy consumers using futuristic communications devices and services and are told that our telecom laws are only slightly more recent than the invention of plumbing. Allow for true market-based competition without all of those inconvenient regulations, the

commercials say, and it'll truly be a wonderful world indeed! And there's not a phone bill in sight!

Of course, the carriers are plainly anti-market and have been for the duration. Such is the nature of corporate species that have thrived exclusively in a highly controlled regulatory environment.

Regulatory habitats are by nature anti-market as well, regardless of the pro-market leanings of their top officials. This is why regulatory reform itself is inherently nutty. This point was **made expertly** last Wednesday by **Susan Crawford**:

I want to persuade us that all of this talk about convergence over the last few years is not true. Stepping away from interpretation of the 1996 Act itself, it seems to me that telephone services are fundamentally different from the internet, and the notion of carrying particular social policies over from the telephone world to the internet (without taking into account what the internet is) is already proving to be hopelessly wrongheaded, needlessly expensive, and shortsighted.

The question assumes that we need "an effective framework to govern the internet." There's a lot of law that already applies online, and I have not seen a demonstration that more new law is needed--and, in any event, it's not the FCC that is in the best position to do it. If we're going to depart from the central Section 230 notion that the online world is unfettered by special-purpose federal or state laws, that should be a conscious choice. Right now, it's all ad hoc, backwards looking, and unprincipled. And destructive. E911 and CALEA certainly fit this description, and I have a feeling that universal service will too when it erupts from the Commission.

We need a sustained national conversation about all this--maybe we'll end up with this same approach, but I'd like to think not. Why can't we be both more hopeful and emphatic--take the lead, around the world--about the approach to the internet that we want?...

What happened to our leadership on internet policy? When did we lose the ability to walk and slide back into the sea? We experimented and tugged and pulled and came up with the idea of linking machines together with a common language, making it possible for humans to interact in unprecedented ways. Now we're turning those machines back into the machines we thought we were escaping--telephones, cable systems, and televisions--using insiders' language so that we can hide what's going on from the general public. What happened?

Glad you asked, Susan. I have the answer.

Scenario III: Fight with Words and Not Just Deeds

All due credit to the **EFF**, **Creative Commons** and every other organization in the pro-Net alliance, but there isn't much hope of changing hearts and minds as long as we think and talk in the transport language of the telcos, cablecos and "content" producers. When we do that, we lose. Case in point: **Eldred vs. Ashcroft**. **Larry Lessig** and other **good guys** fought the good fight on Eldred and lost when the Supremes sided 7-2 with Ashcroft. In January, 2003, I **suggested** that one reason the good guys lost was, literally, linguistic:

I've been trying to collect my thoughts about the **Eldred** decision. At this point I think there are several contexts that need to be explored.

One is **legal**--constitutional, really. **Larry** and the **lawbloggers** (sounds like a good name for a band) are all over that one.

Another is **political**. The Sony Bono Act was a political creation in the first place, and the Supreme Court decision in its favor was a political victory for Hollywood (yes, print publishers had some interest in it, but the **story** plays as a Hollywood victory, complete with quotes from Jack Valenti and Hillary Rosen).

The third is **metaphorical**. I believe Hollywood won because they have successfully repositioned copyright as a property issue. In other words, they successfully urged the world to understand copyright *in terms of* property. *Copyright = property* may not be accurate in a strict legal sense, but it still makes common sense, even to the Supreme Court. Here's how Richard Bennett puts it:

The issue here isn't enumeration, or the ability of Congress to pass laws of national scope regarding copyright; the copyright power is clearly enumerated in the Constitution. The issue, at least for the conservative justices who sided with the majority, is more likely the protection of property rights. In order to argue against that, Lessig would have had to argue for a communal property right that was put at odds with the individual property right of the copyright holder, and even that would be thin skating at best. So the Supremes did the only possible thing with respect to property rights and the clearly enumerated power the Constitution gives Congress to protect copyright.

Watch the language. While the **one side** talks about *licenses* with verbs like *copy*, *distribute*, *play*, *share* and *perform*, the **other side talks** about *rights* with verbs like *own*, *protect*, *safeguard*, *protect*, *secure*, *authorize*, *buy*, *sell*, *infringe*, *pirate*, *infringe*, and *steal*.

This isn't just a battle of words. It's a battle of understandings. And understandings are framed by conceptual metaphors. We use them all the time without being the least bit aware of it. We talk about *time* in terms of *money* (save, waste, spend, gain, lose) and *life* in terms of *travel* (arrive, depart, speed up, slow down, get stuck), without realizing

that we're speaking about one thing in terms of something quite different. As the cognitive linguists will tell you, this is not a bad thing. In fact, it's very much the way our minds work.

But if we want to change minds, we need to pay attention to exactly these kinds of details.

"The Commons" and "the public domain" might be legitimate concepts with deep and relevant histories, but they're too arcane to most of us. **Eric Raymond** has told me more than once that the Commons Thing kinda rubs him the wrong way. *Communist* and *Commonist* are just a little too close for comfort. Too social. Not private enough. He didn't say he was against it, but he did say it was a stretch. (Maybe he'll come in here and correct me or enlarge on his point.) For many other libertarians, however, the stretch goes too far. Same goes for conservatives who subscribe to the same metaphorical system in respect to property.

So the work we have cut out for us isn't just legal and political. It's conceptual. Until we find a way to win that one, we'll keep losing in Congress as well as the courts.

Helpful reading on a similar (and to some degree related) case: ***Metaphor, Morality, and Politics, Or, Why Conservatives Have Left Liberals In the Dust***, by **George Lakoff**. **Larry Lessig replied:**

Doc has a brilliant and absolutely correct **diagnosis** at the American Open Technology Consortium website about how we lost in Eldred. Copyright is understood to be a form of simple property. The battle in Eldred thus sounded like a battle for and against property. On such a simple scale, it was clear how the majority of the Court would vote. Not because they are conservative, but because they are Americans. We have a (generally sensible) pro-property bias in this culture that makes it extremely hard for people to think critically about the most complicated form of property out there--what most call "intellectual property." To question property of any form makes you a communist. Yet this is precisely our problem: To make it clear that we are pro-copyright without being extremists either way.

So deep is this confusion that even a smart, and traditionally leftist social commentator like Edward Rothstein makes the same fundamentally mistake in a piece published Saturday. He describes the movement, of which I am part, as "countercultural," "radical," and anti-corporate. Now no doubt there are some for whom those terms are true descriptors. But I for one would be ecstatic if we could just have the same copyright law that existed under Richard Nixon.

Our problem is, as Doc rightly points out, that we have so far failed to make it clear to the world who the radicals in this debate are.

The radicals in Larry's proximal debate are copyright extremists of the **Sonny Bono school**, which favors extension of copyright to "forever less one day". In *this* debate the radicals are the carriers. We need to fight them, just as Larry and crew need to fight the copyright extremists: by re-framing the subject.

To start we acknowledge the necessity of the transport metaphor; but also its insufficiency.

Of course, at its base level the Net is a system of pipes and packets. But it's *not only* packets, or "content" or *anything* for that matter). Understanding the Net only in transport terms is like understanding civilization in terms of electrical service or human beings only in terms of atoms and molecules. We miss the larger context.

That context is best understood as a place. When we speak of the Net as a "place" or a "space" or a "world" or a "commons" or a "market" with "locations" and "addresses" and "sites" that we "build", we are framing the Net as a **place**.

Most significantly, the Net is a **marketplace**. In fact, *the Net is the largest, most open, most free and most productive marketplace the world has ever known*. The fact that it's not physical doesn't make it one bit less real. In fact, the virtuality of the Net is what makes it stretch to worldwide dimensions while remaining local to every desktop, every point-of-sale device, every ATM machine. It is in this world-wide marketplace that free people, free enterprise, free cultures and free societies are just beginning to flourish. It is here that democratic governance is finally connected, efficiently, to the governed.

It is **on** and not just **through**--prepositions are key here--the Net that governments will not only *derive* their just powers from the **consent of the governed** but *benefit directly* from citizen involvement as well.

As a place, the Net has always been *independent* of the carriage on which it relies, which is one reason it also encourages and rewards independence. The independence of the Net and its inhabitants is precisely what accounts for countless new businesses and improved old ones.

The architecture of the Net's world is End-to-End (See "**End to End Arguments in System Design**" by J.H. Saltzer, **D.P. Reed** and D.D. Clark). In "**The Rise of the Stupid Network**", which he wrote for the benefit of his employer while he was still at AT&T, **David Isenberg** says "The Internet breaks the telephone company model by passing control to the end user. It does this by taking the underlying network details out of the picture." In "**World of Ends**", David Weinberger and I added:

The Internet is Stupid.

The telephone system, which is not the Internet (at least not yet), is damn smart. It knows who's calling whom, where they're located, whether it's a voice or data call, how far the call reaches, how much the call costs, etc. And it provides services that only a phone network cares about: call waiting, caller ID, *69 and lots of other stuff that phone companies like to sell.

The Internet, on the other hand, is stupid. On purpose. Its designers made sure the biggest, most inclusive network of them all was dumb as a box of rocks.

The Internet doesn't know lots of things a smart network like the phone system knows: Identities, permissions, priorities, etc. The Internet only knows one thing: this bunch of bits needs to move from one end of the Net to another.

There are technical reasons why stupidity is a good design. Stupid is sturdy. If a router fails, packets route around it, meaning that the Net stays up. Thanks to its stupidity, the Net welcomes new devices and people, so it grows quickly and in all directions. It's also easy for architects to incorporate Net access into all kinds of smart devices--camcorders, telephones, sprinkler systems--that live at the Net's ends.

That's because the most important reason Stupid is Good has less to do with technology and everything to do with value...

Adding value to the Internet Lowers its Value.

Sounds screwy, but it's true. If you optimize a network for one type of application, you de-optimize it for others. For example, if you let the network give priority to voice or video data on the grounds that they need to arrive faster, you are telling other applications that they will have to wait. And as soon as you do that, you have turned the Net from something simple for everybody into something complicated for just one purpose. It isn't the Internet anymore.

All the Internet's value grows on its edges.

If the Internet were a smart network, its designers would have anticipated the importance of a good search engine and would have built searching into the network itself. But because its designers were smart, they made the Net too stupid for that. So searching is a service that can be built at one of the million ends of the Internet. Because people can offer any services they want from their end, search engines have competed, which means choice for users and astounding innovation.

Search engines are just an example. Because all the Internet does is throw bits from one end to another, innovators can build whatever they can imagine, counting on the Internet to move data for them. You don't have to get permission from the Internet's owner or systems

administrator or the Vice President of Service Prioritization. You have an idea? Do it. And every time you do, the value of the Internet goes up.

The Internet has created a *free market for innovation*. That's the key to the Internet's value.

The term "world of ends" was inspired by **Craig Burton's** characterization of the Net's "stupid" end-to-end architecture as a three-dimensional zero. "In fact," he says, "there's no other way to visualize a place comprised of nothing but ends, all zero distance from each other, where all the intelligence is on the outside". He adds, "It's important to remember that zero is the value here. You can't get in the middle of this world and say 'This zero isn't valuable enough. I'm going to improve it.' That would be like jumping in the middle of the Earth and saying 'I'm going to improve on this gravity business'."

While the Net's nature is a world-wide **place**, the Web's nature is a world-wide **publishing system**. **The Web** was invented by **Tim Berners-Lee**, a scientist who wanted a simple way documents could be published and read, anywhere in the world, without restriction by physical location or underlying transport system. That's why it has *hypertext* protocols, "languages" and "formatting" standards. It's also why we "write", "author" and "mark up" "documents" called "pages" and "files" which we "post", "publish" or "put up" so others can "index", "catalog" and "browse" them.

To sum up, the Net has all these natures:

1. transport system (pipes)
2. place (or world)
3. publishing system

--and others as well. But those aren't at war with one another, and that's what matters most.

Right now #1 is at war with #2 and #3, and that war isn't happening only in the media and in congressional hearing rooms. It's happening in our own heads. When we talk about "delivering content to consumers through the Net", rather than "selling products to customers on the Net", we take sides with #1 against #2. We unconsciously agree that the Net is just a piping system. We literally *devolve*: our lungs turn to gills, our legs turn into flippers, and we waddle back into the sea--where we are eaten by sharks.

What I'm talking about here isn't "just semantics" or trivial in any other way. It's fundamental, especially to lawmaking and regulation.

For example, if we describe *speech* and *publishing*, that stuff the **First Amendment** protects as "content", then the rights granted to speech

become subordinate to regulations governing carriage. Look into the metaphors used by the Supreme Court in **its decision in favor of the National Cable & Telecommunications Association, et. al., in that group's suit against Brand X. Internet Services, et. al.:**

The Communications Act of 1934, as amended by the Telecommunications Act of 1996, defines two categories of entities relevant here. "Information service" providers--those "offering"; a capability for [processing] information via telecommunications, 47 U.S.C. § 153(20)--are subject to mandatory regulation by the Federal Communications Commission as common carriers under Title II of the Act. Conversely, telecommunications carriers--i.e., those "offering" telecommunications for a fee directly to the public "regardless of the facilities used," §153(46)--are not subject to mandatory Title II regulation. These two classifications originated in the late 1970's, as the Commission developed rules to regulate data-processing services offered over telephone wires. Regulated "telecommunications service" under the 1996 Act is the analog to "basic service" under the prior regime, the Computer II rules. Those rules defined such service as a "pure" or "transparent" transmission capability over a communications path enabling the consumer to transmit an ordinary-language message to another point without computer processing or storage of the information, such as via a telephone or a facsimile. Under the 1996 Act, "[i]nformation service" is the analog to "enhanced" service, defined by the Computer II rules as computer-processing applications that act on the subscriber's information, such as voice and data storage services, as well as "protocol conversion," i.e., the ability to communicate between networks that employ different data-transmission formats.

In the Declaratory Ruling under review, the Commission classified broadband cable modem service as an "information service" but not a "telecommunications service" under the 1996 Act, so that it is not subject to mandatory Title II common-carrier regulation. The Commission relied heavily on its Universal Service Report, which earlier classified "non-facilities-based" ISPs--those that do not own the transmission facilities they use to connect the end user to the Internet--solely as information-service providers. Because Internet access is a capability for manipulating and storing information, the Commission concluded, it was an "information service." However, the integrated nature of such access and the high-speed wire used to provide it led the Commission to conclude that cable companies providing it are not "telecommunications service" providers. Adopting the Universal Service Report's reasoning, the Commission held that cable companies offering broadband Internet access, like non-facilities-based ISPs, do not offer the end user telecommunications service, but merely use telecommunications to provide end users with cable modem service. Disregard for now the opacity of the prose and even the complete absence of the *place* and *publishing* metaphors that define the Net and the Web. Just look at the time scale involved. There are a series of regulatory regimes here, beginning with the **Telecommunications Act of 1934**. Today we operate under the **Telecommunications Act of 1996**. Reforms of that act are likely to remain law for a long time.

Meanwhile, we have **Section 1464 (Broadcasting Obscene Language)** in **CHAPTER 71 - OBSCENITY** in **PART I - CRIMES of TITLE 18 - CRIMES AND CRIMINAL PROCEDURE** of the **United States Code**, which forced the FCC to rationalize stomping all over the First Amendment. Look at the headings under **Chapter 71**, and you'll find that most of the sections (including 1464) begin with transportational verbs: *Mailing, Importation, Broadcasting, Distribution, Transfer.*

Thanks to the transport metaphor, the **FCC** can **punish** forms of speech it calls "obscene", "profane" or "indecent" and explain it in a document titled "content.html". The same victory of *pipes* over *place* accounts for this tortured entry in its **Obscenity, Indecency & Profanity FAQ**:

The First Amendment to the U.S. Constitution and Section 326 of the Communications Act prohibit the FCC from censoring broadcasters. The FCC does not, therefore, monitor particular programs or particular performers, but rather enforces the prohibition on obscenity, indecency and profanity in response to complaints.

Thanks to the transport metaphor, even relatively pro-market and pro-Net regulators, such as former FCC Chairman Michael Powell, **speak about** "consumers" having "rights" to "access" and "attach" to "connections" about which they should have "choices". In fact, the whole case for "protecting consumers" from bad content and its sources is framed in terms that reify the Net as a system of pipes.

One reason *transport* trumps *place* is that business itself is largely, though not entirely, conceived in shipping terms. The "value chain" is a transportational notion. We speak of "loading" goods into "channels" for "distribution" to "end users" or "consumers". We even talk about "delivering" services.

On the other hand, we have understood markets as *places* since *marketplaces* were the only kinds of markets we had. The metaphors that come naturally to Wall Street are helpful here. When we speak of "bulls", "bears" and "invisible hands", we assume those beings operate in a place-like environment. When we say markets have feelings-- "excitement", "fear", "anticipation", "reaction"--we assume those happen in an environment (that is, a place) as well. Even "Wall Street" is ontologically locational. It is a real place that serves, by what cognitive linguistics call **metonymy**, for the whole stock market, which we also conceive of as a place.

Experience counts. Humans are physical beings. All of us who use the Net experience it as a place. Prepositions are revealing. We go *on* the Net, not *through* it.

In *Metaphors We Live By*, George Lakoff and Mark Johnson write:

... even where there is no natural physical boundary... we impose boundaries--marking off territory so that it has an inside and a bounding surface... There are few human instincts more basic than territoriality. We who know and understand the territorial nature of the Net need to appeal to the same territorial sense in those we hope to win over with our arguments.

Advocating and saving the Net is not a partisan issue. Lawmakers and regulators aren't screwing up the Net because they're "Friends of Bush" or "Friends of Hollywood" or liberals or conservatives. They're doing it because one way of framing the Net--as a *transport system* for *content*--is winning over another way of framing the Net--as a *place where markets and business and culture and governance* can all thrive. Otherwise helpful documents, including Ernest Partridge's "After the Internet" fail because they blame "Bush-friendly conservative corporations" and appeal only to one political constituency, in this case, progressives. Freedom, independence, the sovereignty of the individual, private rights and open frontiers are a few among many values shared by progressives and conservatives. All are better supported, in obvious ways, by the Net as a *place* rather than as a transport system.

This is especially true of the Net as a place where free and open markets thrive. This is the Net that we *built*, where we have *sites* and *locations* and *domains*.

It is also important to describe what the Net is and how it works from the standpoint of technology itself: specifically those that create and enlarge the Net and its services. So we're talking here not just about HTTP and HTML but also XML and RSS. These reify the Net as a place where people and organizations speak and publish and produce and govern and build businesses and perform services. These are made possible, we should make clear, by the end-to-end nature of the Net and by the even-endedness of every participant.

We should avoid getting trapped by arguments about peer-to-peer sharing that drop us into the mud-pit of Hollywood's "piracy" fears and residual disdain by conservative lawmakers (still the majority) for anything that smacks of Communism. Unfortunately, that means we should also avoid talking about the Net as a "commons" except with those who understand the concept.

We need to make clear that the Public Domain is the market's underlying geology--a place akin to the ownerless bulk of the Earth--rather than a public preserve in the midst of private holdings. This won't be easy, but it can be done.

We need to stress the fact that the primary "end" in the Net's end-to-end architecture is the individual. The Net's success is due far more to

the freedoms enjoyed by individuals than to the advantages enjoyed by large companies whose existence predates the Net.

We need to remind policy makers that the Net's biggest success stories--Amazon, Google, eBay and Yahoo--are the stories of Bezos, Page, Brin, Omidyar, Yang and Filo.

We need to make clear that the Net is the best public place ever created for private enterprise, and that the success of the Net owes infinitely more to personal initiative than to the mesh of pipes in the ground beneath it.

We need to show how the Net has its own nature, and that this nature is too **dynamic**--too original, too wild and free, too self-creating and self-correcting--for new lawmaking to comprehend, much less control.

We need to stress how the pipe-centric view of the world is responsible for the crippled and asymmetrical "consumer" service the carriers call "broadband". By restricting upstream use of the Net and biasing service to downstream "content delivery", the carriers have effectively outlawed personal and small business enterprise on the Net. This is one area where the carriers have been persistently clueless and hostile to the Net since the beginning, and we need to call them on it. (Required reading: John Perry Barlow's **Death From Above**, written in March 1995.)

I could go on, but I'd rather leave that up to the rest of you.

These are ideas, of course. I present them forcefully because I believe we--the technical community--are being called to fight for a world we made and continue to make. And one which is under grave threat.

That threat appears in many forms, all of which are easy to blame and attack. But all those forms are expressions of a simple concept: that the Net is, above all, a system of pipes. Those pipes are in fact below, not above. They support a World of Ends, but they don't define it.

Unless we let them.

A few final words about deeds. Right now we face a number of deadlines on anti-Net legislation being lobbied through Congress by what David Berlind calls "Tellywood", with help from the carriers. He **explains the situation** expertly:

So, in November 2003, **the FCC instated a rule** that, as of July 1, 2005, **required all television receivers to include the anti-piracy technology**. But prior to that day of reckoning, saying the FCC didn't have the authority to make such a rule, **a federal court struck the mandate down on May 6**. But the ruling wasn't a complete victory because it also said that Congress could pass a law to the same effect. So then, Congress got into the act (literally and figuratively). In June

2005, on the heels of the federal court's decision, Tellywood's lobbies looked to revive the mandate by getting the Senate to sneak an amendment into a largely unrelated spending bill (Gee, deja vu. Certain Massachusetts' Congresspeople are looking to screw the OpenDocument Format with **the same unrelated-bill-ammendment technique**). But the "fair rights lobby" [sic] raised a stink and the **Senate Appropriations Committee thankfully punted**. Then, in September, 20 members of Congress who were clearly looking out for the fair use rights of the people they represent (not) **called for a reinstatement of the broadcast flag mandate**. Earlier this month however, some members of the U.S. House of Representatives **remained unconvinced** that such broadcast flag legislation wouldn't marginalize fair use rights.

As if it isn't bad enough that certain Congresspeople are looking to stifle fair use rights with broadcast flag related legislation, the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA) are pushing two other fair-use rights limiting bills on Congress.

David goes on to talk about how **the RIAA helped author the HD Radio Content Act of 2005**, which would prevent you from recording anything off the digital signals slated to replace the analog ones still on radios today. He adds:

As if the HD Radio Content Protection Act of 2005 doesn't tighten the noose enough, there's also the Analog Content Security Preservation Act of 2005. A **November 3, 2005-dated draft of the proposed legislation is available from the Electronic Frontier Foundation**.

The idea behind this legislation, which has the backing of the MPAA, is to make it illegal for consumer device manufacturers not to plug the infamous **analog hole** (another hole in the leaky dam).

The list goes on. **Read it**. Then contact your Congresspeople. Tell them to keep the Net open and free and to vote against any legislation meant to protect any industry from "threats" they see coming from a new world they refuse to understand.

And, as the end of the year approaches, be sure to send your tax-deductible contributions to the **EFF**, **Creative Commons** and other organizations working with *you* to save the Net.

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