

**Distributed networks.**

**The final scattering of media power.**

**[A myrtle white paper](#)**

**[Brian Millar](#)**

## **Executive summary**

The web has accelerated the fragmentation of media.

Now the internet is moving on, and fragmenting further.

From a client/server model to a distributed one:

And people are moving from web browsers to software that lets them communicate one-to-one.

Not a few people. Millions of them.

Is this stuff flaky? Underground? Amateurish, even?

Yup. All the things people said the web was in the mid-90s.

How will brands communicate in a world that makes the web look neat and tidy?

How will some of them survive?

Are we talking about a communications medium, or a distribution channel?

Whatever it is, it's virtually free. But to make any kind of headway on it, you're going to have to do an awful lot of stuff. And be prepared for lots of it not to work.

It could invert the classic communications model where you spend 85% of your budget on media and 15% on production.

(Are you in media? Oops.)

We don't pretend to have all – or any of – the answers.

But at least we're asking some of the questions.

## **Preamble**

Since the day you were born, media have been fragmenting.

Whatever age you are.

The web has accelerated that process.

The above observations are so obvious as to be banal.

But if current trends are anything to go by, some innocuous-looking bits of technology will smash media into tiny spinning pieces, winking in the light.

In most companies, the web moved from the wings to centre stage overnight.

If it can happen once, it can happen again.

## **Geeks can skip the next bit**

Before we begin, let's define some terms.

At the moment many people use "Web" and "Internet" interchangeably. This is a mistake. I'm not just making a pedantic distinction. If you don't know the difference, you're in for a big shock pretty soon.

Once, there were a whole load of computer networks, all wired up in different ways. One couldn't speak to another any more than a Mandarin speaker can communicate with somebody who only understands Dutch.

Imagine: if you wanted to send email to somebody who was on a different kind of computer network, you couldn't.

So a group of people sat down and invented a universal language for computer networks. It's called a **protocol**. Remember this word. We will be using it quite a bit. And you can impress your friends by dropping it into conversations at parties.

The internet is simply lots of computer networks hooked up loosely together. It doesn't matter that they're different, so long as they use the same protocols.

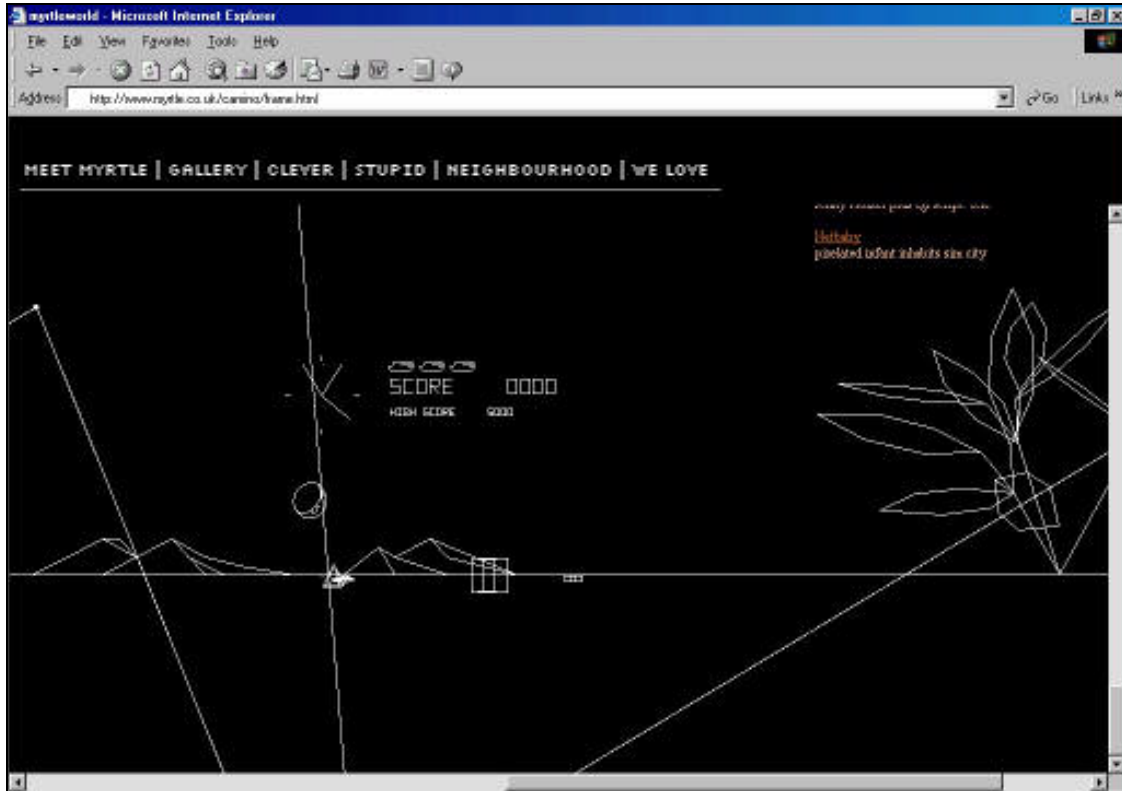
When you send an e mail to a friend, or join a newsgroup, or visit amazon.com, you're using those protocols. You're on the internet.

Geeks might call this definition oversimplistic. Serves them right for not skipping this bit.

And then there's the web.

The world wide web uses internet protocols to connect text documents on computers. Using a further set of protocols, these documents can [link](#) to each other. And (to the horror of Tim Berners-Lee, the www's inventor) you can put pictures on the web.

So the web is a thing that uses the internet. But it's not the internet.



*A web browser. You didn't need to be told what one looks like, but I wanted to fill up this page.*

Old internet lags who remember the pre-web days will recall something quite different to those who have come to it more recently. In those old days just about everything was decentralised. Messages were person-to-person rather than broadcast. If somebody sent you a joke, you could send it to your pals, who'd send it to their pals...

Or you could post it on a bulletin board like alt.humor.sick, and people who shared your tastes might come across it.

Then came the web, and everything changed. The web makes it very easy to post a page which anybody can happen upon, either by searching or through serendipity.

The web brought a new stability to the internet.

Web pages usually stay at a certain address. Even if the content of [www.cnn.com](http://www.cnn.com) changes, you can always find it by clicking on the link in this sentence.

Even if the content of a web page changes, or is customised to suit an individual, the content is consistent. Tomorrow, [etrade](http://etrade) will still be selling stocks online. I sincerely hope they will, anyway.

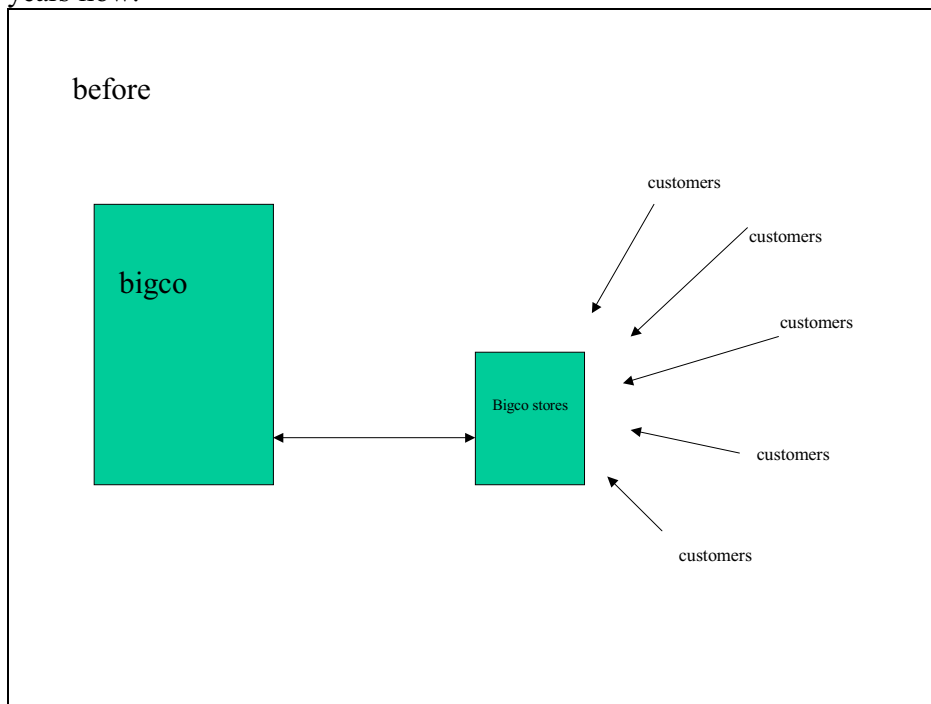
Web pages are usually public.

Web pages are increasingly created by large companies with something to sell. People come to their sites for information, to scope out a product and to buy it.

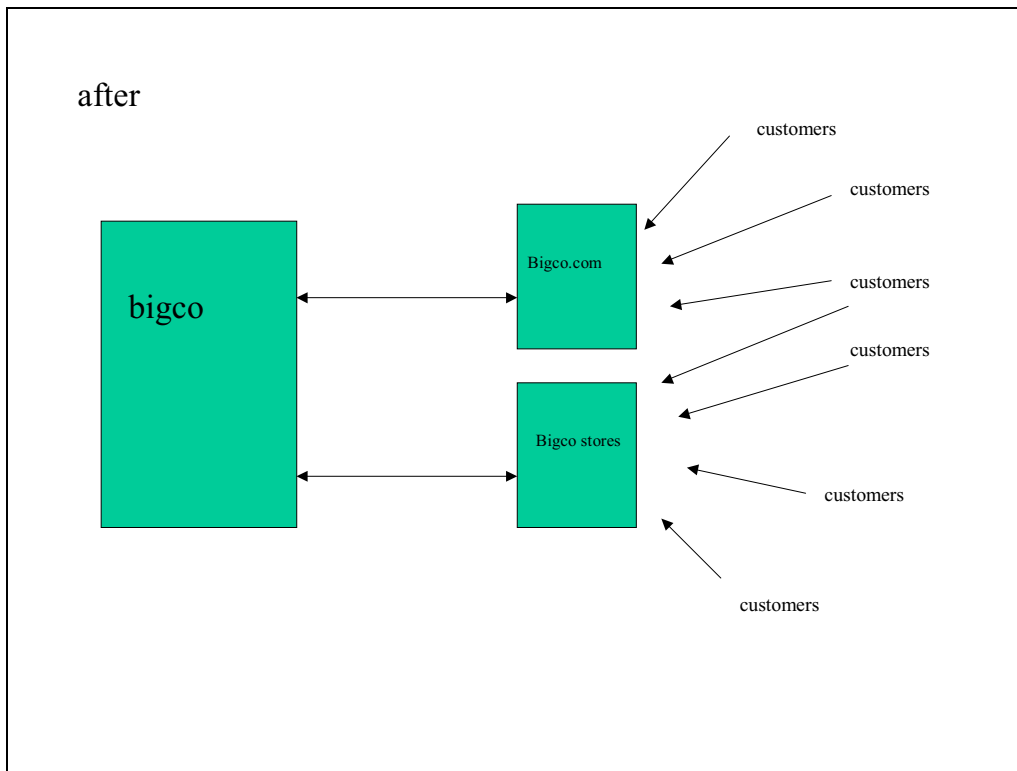
Multiple people come to a single, static page, just as to a shop.

Companies treat them as they would a shopfront – a place to display and sell wares, populated with content which acts like salespeople.

This model is very popular with companies because it can be thought of as any number of real-world analogies: brochure, shopping mall, showroom. It's been with us for a few years now.



*The pre-web world as seen from inside a large corporation*



*The post web world from the same point of view – it's really business as usual*

But other models are creeping in. They use internet protocols in all kinds of different ways, and subvert the certainties of the web.

This is disturbing news for companies who have just got used to the idea of being online at all.

Sorry, everybody.

(OK geeks. You can start reading again.)

### What else is out there

All kinds of things use the internet: email and newsgroups, of course. Then there's a whole host of other exotica. Once marginalised, many of these are becoming more mainstream.

So much so, that many Internet Service Providers are terrified that traffic from these sources may soon overtake web use – and swamp them<sup>1</sup>.

These new models seem to have one thing in common. Whereas the web works on the idea of travelling from large site to smaller site to final destination, (like flying in the post-deregulation United States), these work on a point-to-point model. You go straight to what you want – or it comes to you.

They are part of a larger technological trend from **client-server** to **distributed** computing.

Here's a few of these new models:

[Napster](#)  
[Gnutella](#)  
[Quake servers](#)  
[ICQ](#)  
[mIRC](#)  
[distributed.net](#)

(While I'm going to try to outline what they do, it's no substitute for downloading them and trying them yourself. Hence all the links.)

Let's take Napster and Gnutella first, as they've been in the news recently. Napster is beautiful. I can't be bothered to explain it, so I'll let David Weinberger, from [The Journal of the Hyperlinked Organisation](#)

#### NAPSTER: THE MOST IMPORTANT APP SINCE SEX

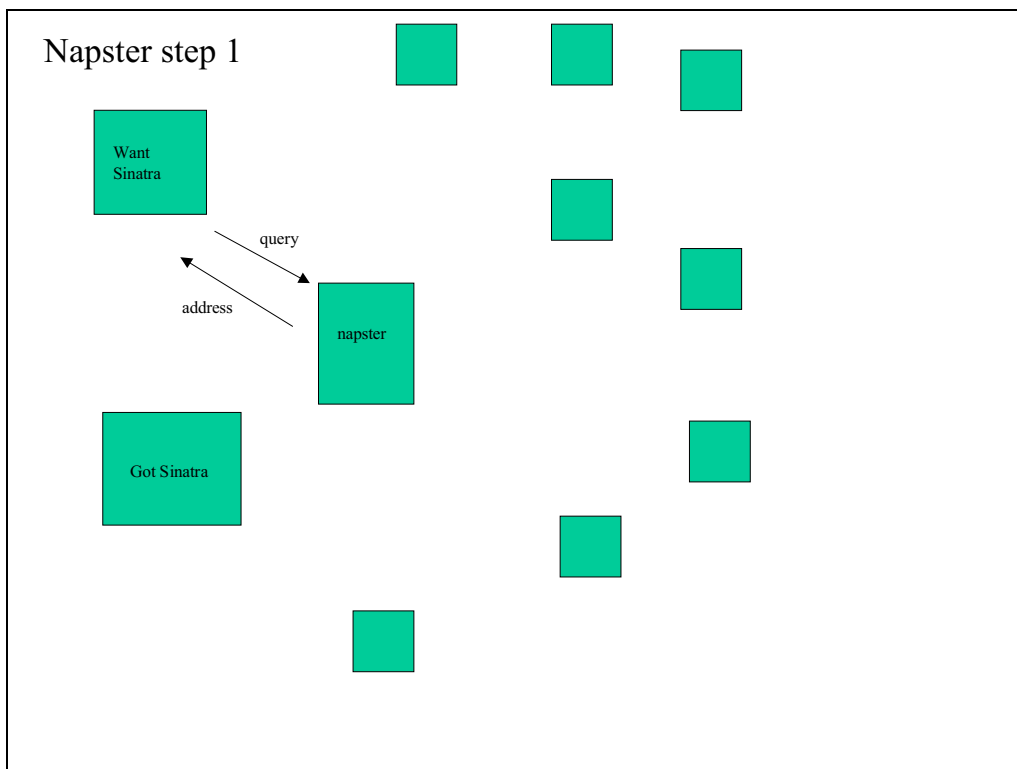
Don't be fooled by the publicity around Napster. If you believe what you read, you'll think that it's a way of sharing MP3 music files that's crippling the bandwidth of major universities. While that's true, it misses the point, casting it in an inappropriate light. [Extra points: find the fiendishly disguised pun in this paragraph.]

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<sup>1</sup> British Telecom's new high speed ADSL service will effectively stop computer users from turning their PC into a server by hobbling it so napster and website hosting software won't work. You can look at the internet, say BT, but don't touch. Wankers.

Napster, on the face of it, aims at building community while getting around the lawsuits being brought by the recording industry. By now you probably know that anyone with a computer can convert audio CD tracks into MP3 files that can be played on a computer or a special player....

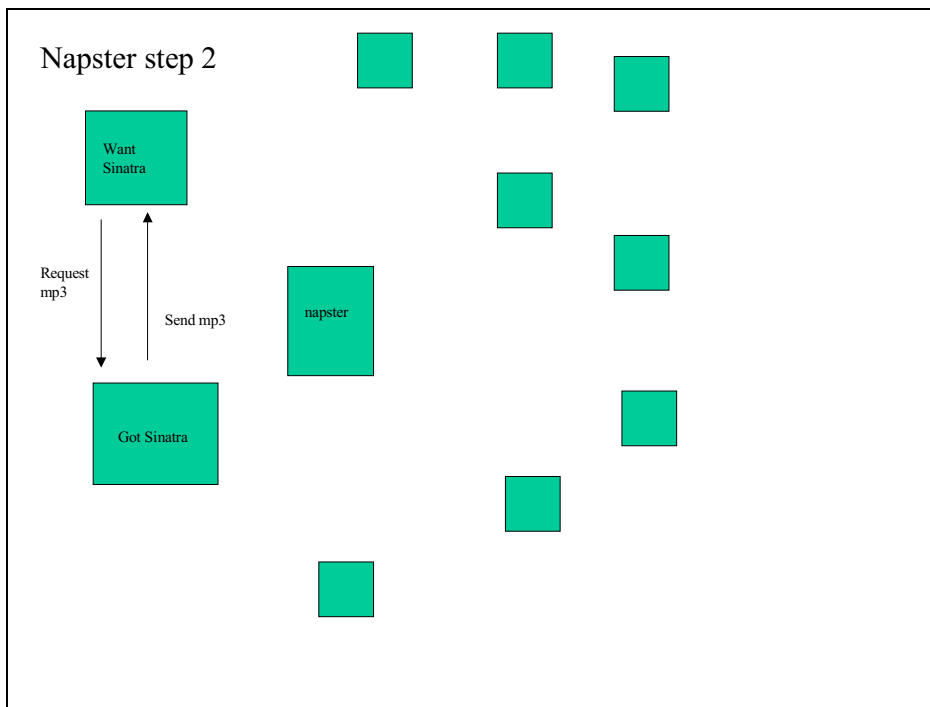
...Megasites such as [www.mp3.com](http://www.mp3.com) store the files, ready to be downloaded and played in winamp or any other MP3-ready player ... which these days includes Microsoft's own media player. This happens, of course, without the record company getting a bite. (If the recording industry hadn't been so rapacious, I might have a smidgen of sympathy for them.)



*I want "Strangers in the night" on MP3. My PC sends a query to the central Napster server, which scans for online Napster users with the song on their hard drive.*

Napster gets around this by not storing any MP3 files on its server. It's just a database of where MP3 files live ... not the big MP3 sites but the hard drives of its members. When you download Napster, you dedicate a directory on your hard drive to it. Any MP3's it finds there it adds to its database. So, if you search for, say, "Strangers in the Night" (because, presumably, you're wicked

stoned), Napster will show you hundreds of copies, in many different versions on hundreds of different hard drives. Find one you want (Napster also lists the speed of the connection from those drives), double click, and, boom, it's pulled off of Joe Doe's hard drive and copied onto your own. Further, the new copy in your Napster directory is now entered into the database and may be downloaded by anyone with a finger left to click.



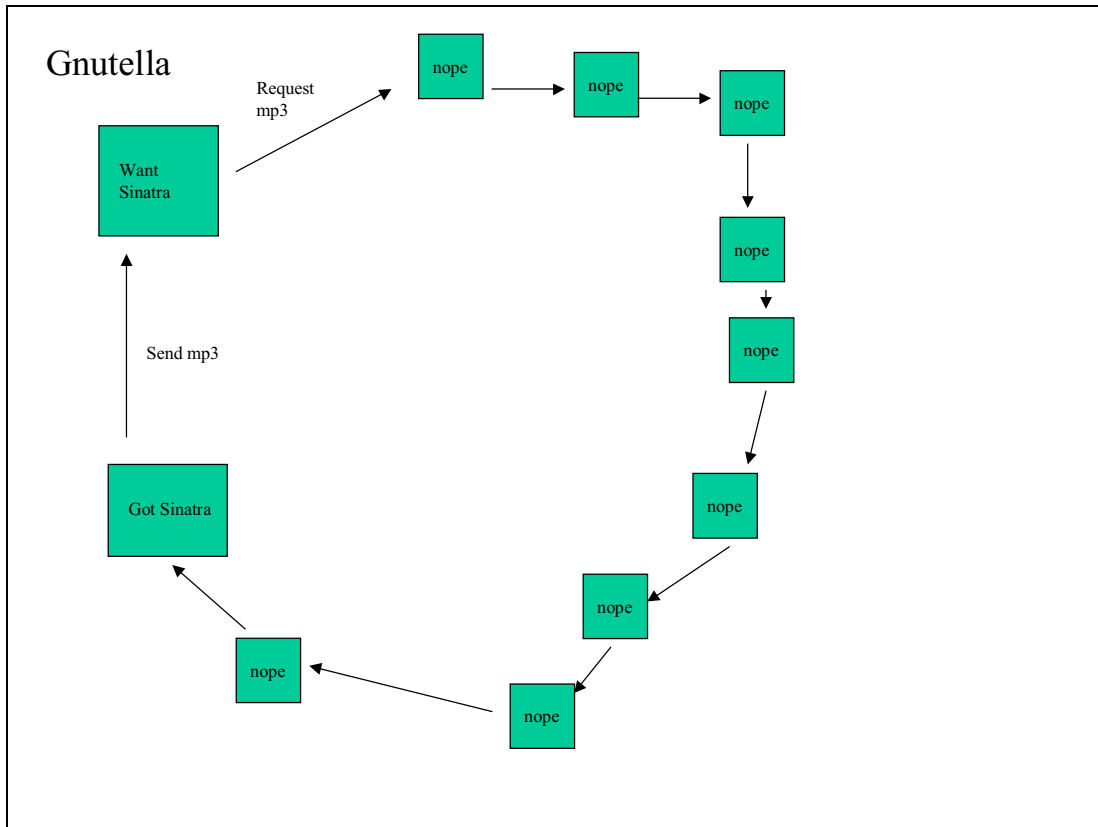
*Napster lists everybody with the song. I select the user with the fastest connection and pull the file off that individual's hard drive. Meanwhile other users are sharing my MP3 files.*

But wait there's more. Or there will be. We just have to wait for the sum total of cleverness of the Web to invent it.

Napster rulz.

### **Gnutella (continued from JOHO)**

Well, um, except maybe Gnutella rulz more. Gnutella doesn't even maintain a database on a server. It instead passes queries along from one user node to another, building a list on the fly. It thus is slower than Napster, but there's nothing there but a protocol, and how are you gonna sue that? And it's open sourced.



*Gnutella hops from user to user till it finds someone with the file I want, then it sends that file to me.*

(Thanks Dave. I'll take it from here). Gnutella turns the whole centralised idea of the web inside out.

Instead of searching big sites for downloads of music and software, I can search individuals' hard drives. While they search my PC for cool stuff I'm willing to share.

My PC isn't a client any more. It's a server. I'm not a spoke anymore. I'm a hub.

Think about the above picture, class. Where does bigco.com's green box fit into it?

## Online games

How big are online games? Well, Quake One grossed more than *Titanic*.

Quake is not just a pursuit of teens and PhD students who shower infrequently. It is the golf of the digerati. Many of the UK's top players are also designers and programmers at some of the best digital and games design houses.

(OK, some of them could do with being slipped a can of Sure, too.)

Building cool Quake levels and bots is the quickest calling card for getting a job with game developers - and indeed with the Pentagon if the rumours about the builder of [stoogebots](#) is true.

Interestingly, Quake II was a relative flop. Although Quake II improved all the baddies and weapons for a single player, it wasn't as much fun online. The weapons got all unbalanced and... oh, don't get me started.

But the makers of Quake, [id software](#), are no idiots. So Quake III doesn't have any baddies. You can't play it by yourself. You have to plug into the net and go looking for other adolescents to frag.



*Player's view of Quake III. There I was with only a shotgun...*

© id software 2000

And Quake III happily provides everything you need to do this – using internet protocols. It even lets you set up a game yourself, using your PC as a server.

Nobody else has any control over how you run the game, or how long you play it. Except perhaps your boss. Or your IT department. Or your mother, depending on age/living habits.

Consider the difference between the web model of interaction and this: on the web you lay out your little trinkets (poems, multimillion pound oil rig equipment, whatever) on a cyber-rug, and wait for the world to come to you. You may have to wait a while, register yourself on search engines, and either hope that word spreads, or spend eighty million quid publicising yourself and [about £2.50 on improving your site](#).

With Quake III, any online gamer in the world can see you the instant you set up a game. If they can get a fast enough connection to you, if there are people playing around their level, if you're providing a fun game, they'll flock to you till your PC maxes out.

| Server Name                          | Game   | Map                   | Ping 1> | Players |
|--------------------------------------|--------|-----------------------|---------|---------|
| BarrysWorld - ID CTF Q2 (1)          | ctf    | Capture Showdown      | 242     | 9/18    |
| Acidbath Chicago CTF Lithium <<Mhz>> | ctf    | ctffive               | 347     | 1/16    |
| Dg 7 South Ctf                       | ctf    | McKinley Revival      | 371     | 5/10    |
| Durham.Net                           | ctf    | Outlands (CTF)        | 391     | 8/14    |
| PC Gamer - Ground Zero               | rogue  | rdm2                  | 395     | 9/16    |
| Hotwire CTF                          | ctf    | Stronghold Opposition | 397     | 14/18   |
| DragonLair! CTF                      | ctf    | McKinley Revival      | 397     | 1/16    |
| Main Domain LaserMine CTF v3.19      | ctf    | McKinley Revival      | 398     | 9/20    |
| eFusion/TULL Q2CTF                   | ctf    | The Smelter           | 418     | 13/14   |
| @Home CTF                            | ctf    | Capture Showdown      | 434     | 15/20   |
| NETD00R-q2ctf-3.20                   |        | Outlands II           | 443     | 14/24   |
| -[tS]- Clan toy Soldiers DM Arena #1 | puredm | Lava Tomb             | 446     | 5/8     |
| BlackTongue Q2CTF1.09                | ctf    | McKinley Revival      | 455     | 1/16    |
| Inferno Quake 2 CTF                  | ctf    | Outlands (CTF)        | 468     | 8/16    |

*Looking for trouble: a list of current Quake II games. "Ping" refers to the speed of connection to your computer. Repeat after me: Low ping is good.*

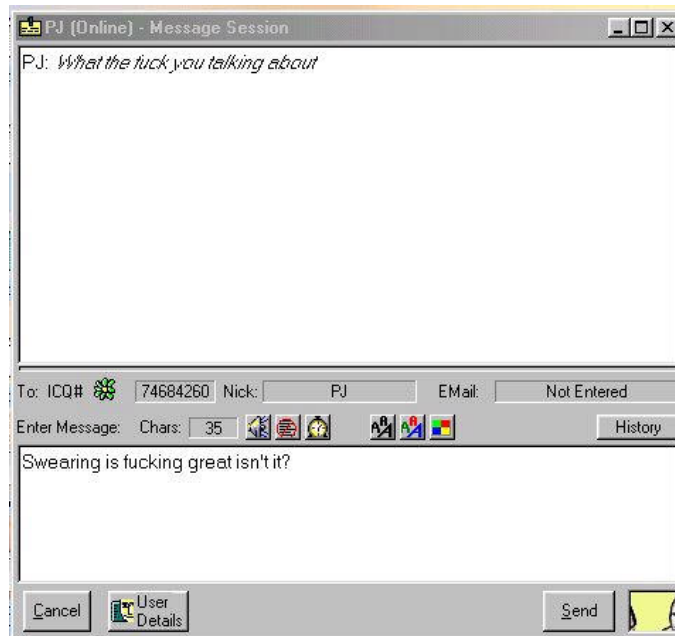
In the meantime, they're completely bypassing the web, advertising messages, multibillion dollar portals and all and zapping straight into your machine.

Hooray.

Quake isn't an isolated example of this. Every game designer with half a brain is racing to follow Quake's model, and with the release of Sony's Playstation 2 it is a model which has reached the late-adopter mainstream. You now don't need to know a server from Bjorn Borg to become a fully-fledged internet hub.

## Chat

[ICQ](#) is email on crack. It's a one-on-one environment where you actually see the other person typing, correcting their mistakes and re-typing. It's about as live as you can get with a keyboard and a screen.



If you know the ICQ number of a friend, you call them up direct. So long as they have ICQ running on their machine, you'll be connected instantly. And as it's been downloaded over 100 million times, *somebody* you know is going to have it.

If you have no friends online, or just no friends, ICQ will find one for you. To find people with similar interests to you, there's a directory at the ICQ website. So to some extent ICQ still clings to the web for support.

*ICQ. Meet new people. Swear at them.*

Not so [mIRC](#). IRC is Internet Relay Chat. I don't know what the m stands for. I don't care. mIRC provides multiple "chat rooms" on just about any subject. You can even set up private encoded chats which strangers can't see without a keycode. This has made it the medium of choice for criminals everywhere.

If you have a question about, say, Napster, you can go to the #napster channel on mIRC and find somebody who can give you the answer there and then. This has the great advantage over newsgroups in that there's no waiting. Its disadvantage of course is that if there's nobody around in real time, then your question drifts off into the ether.

I recently sat next to a bloke in a cybercafe who was conducting 3 simultaneous Q and A sessions on HTML programming: One in English, two in French. He had other mIRC channels open, just waiting for other people to start logging in.

Once again, these two programs use internet protocols while (almost) completely bypassing the conventional web. There's no archives, and little sense of the extent of their use. They are ephemeral as everyday speech.

## Summary

| <b>Web model</b>  | <b>Distributed model</b>                     |
|---|--|
| My computer is a client                                   | My computer is a server                      |
| Sites are static, customers move<br>24/7                  | Everything moves<br>When people feel like it |
| Sites are owned by individs and companies                 | Nobody owns anything                         |
| Text is archived  | Text is ephemeral                            |
| I visit a few sites regularly and thoroughly <sup>2</sup> | I make hundreds of brief connections         |
| Changes only when you publish a new page                  | Constant state of flux                       |

## Conclusion

The web has turned the internet into a hub-and-spoke model.

The people who own the biggest hubs make the most money.

Traffic at these hubs is measured in tens of millions weekly.

New technology is changing that model again.

People are finding new ways to seek each other out, to find out the information they need.

We don't need hubs so much any more.

We are navigating from person to person.

We are all becoming mini – hubs, defined by what we like to do, and what files are on our computers.

The internet is not the web.

The internet may be moving away from the web model.

Which is not to say that the web will disappear. It's still useful for all kinds of things.

But it may become less central to people's online habits.

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<sup>2</sup> [Source](#): Nielsen/Netratings Nov 1999: Average user spends 8 hours surfing per month, only visits 10 unique sites in that time, and views 541 pages: Over 50 pages per site on average.

Which means less central to business' strategies.

The internet is becoming much more than the web.

### **Communications and distributed networks**

Question: when conversations are one-to-one, how does a brand butt in on them?

Question: do brands have a place at all in people's conversations?

Certainly there are signs that they do. Metallica is a brand. [Metallica](#) music is heavily sought-after on Napster.

But Metallica is a brand that has been built elsewhere, on radio stations, on MTV, on black T shirts worn by the stoned and stupid youth of middle America.

Brands *are* built in conversations, but usually as personal recommendations.

What course of action does this leave brands if media partially fragments to the level of the individual?

“Try to be cool so people will like you and talk about you,” is good advice.

[Gonzo marketing](#) is one way to achieve that.

You can try to facilitate some point to point interaction, but you have to accept that you'll be flinging people off your directory as soon as they arrive. Nobody's going to hang around.

You can try to help people find common ground, beyond a desire to shoot rockets at each other.

Or you can just give in to the inevitable and help people shoot rockets at each other. Sponsor a Quake Clan (what they call teams). Quake players are much, much, much cheaper than footballers.

### **Medium or channel? ... Alternatives to communication**

Question: are distributed networks primarily a communication medium?

Possibly not. Not in any commercial sense.

So what are they?

They *are* a distribution channel. They're the most efficient way ever devised to distribute software. By software I mean music, pictures, programs, even whole movies – anything that can be digitised.

These days that doesn't exclude much.

And at the moment it's almost impossible to charge for this. That may change. But I doubt it.

If it can be digitised, it is going to be free.

The really big question to be answered here is not, "How can my brand communicate on these new channels?", but:

"Is my brand going to survive as a commercial entity if these people are sharing my stuff for free?"

If you make something physical, the answer is pretty obviously yes. As a can of Coke can't be digitised, Coke's brand could profit by giving cool digitised content away. In the meantime its sales won't fall.

If you're a content provider, that's a more difficult question. MGM's movies currently gross a lot of money. That's going to change if they're going to be 100 minute free merchandise commercials.

And encoding your stuff with proprietary encryption like DVD? [Don't even think about it.](#)

### **Fat dumb and happy**

If it's any consolation, most newspapers are now online. And most of them are free. It doesn't seem to have hurt their dead tree circulation any – if anything the opposite is the case. And meanwhile their advertising revenue has increased.<sup>3</sup>

The web, we are told, wants to be free. Distributed networks *will* be free.

Maybe it's time for brands to start thinking about making themselves famous by giving great stuff away for free. After all, they currently spend millions making commercials that fewer and fewer of us want to watch. How about using a fraction of that to give away useful things that we might actually want to share with others?

Economically this makes a lot of sense. Production is usually around 10 – 15% of the cost of running an ad: the rest goes on media planning and buying.

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<sup>3</sup> Source: Mindshare

A distributed internet model means that your media is effectively free. People will distribute stuff they like. Send one copy of something to a networked individual. If they like it, it'll spread exponentially. And if they don't, it dies in obscurity and saves you the embarrassment of running a turkey in the middle of the evening news.

Rather like this document – send it to a mate if you think it's useful, bury it in obscurity if you don't.

More production resources and more methods of distribution means you can experiment more – build on the successes and learn from the failures. Above all, the more we think about this model, the more it becomes apparent that the greatest danger is overthinking this stuff.

Overthinking, bad. Overdoing, good.

Howard Luck Gossage is the godfather of Gonzo marketing and a hero of ours.

After seeing Marshall McLuhan lecture, Gossage decided he'd spend \$20 000 taking him around every boardroom in the US. McLuhan asked why - how would Gossage profit from such a venture.

“I don't know,” said Gossage. “I'm just playing it fat, dumb and happy.”

We salute you, Howard Luck Gossage. You were born too soon.



*Howard Luck Gossage 1917-1969*

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