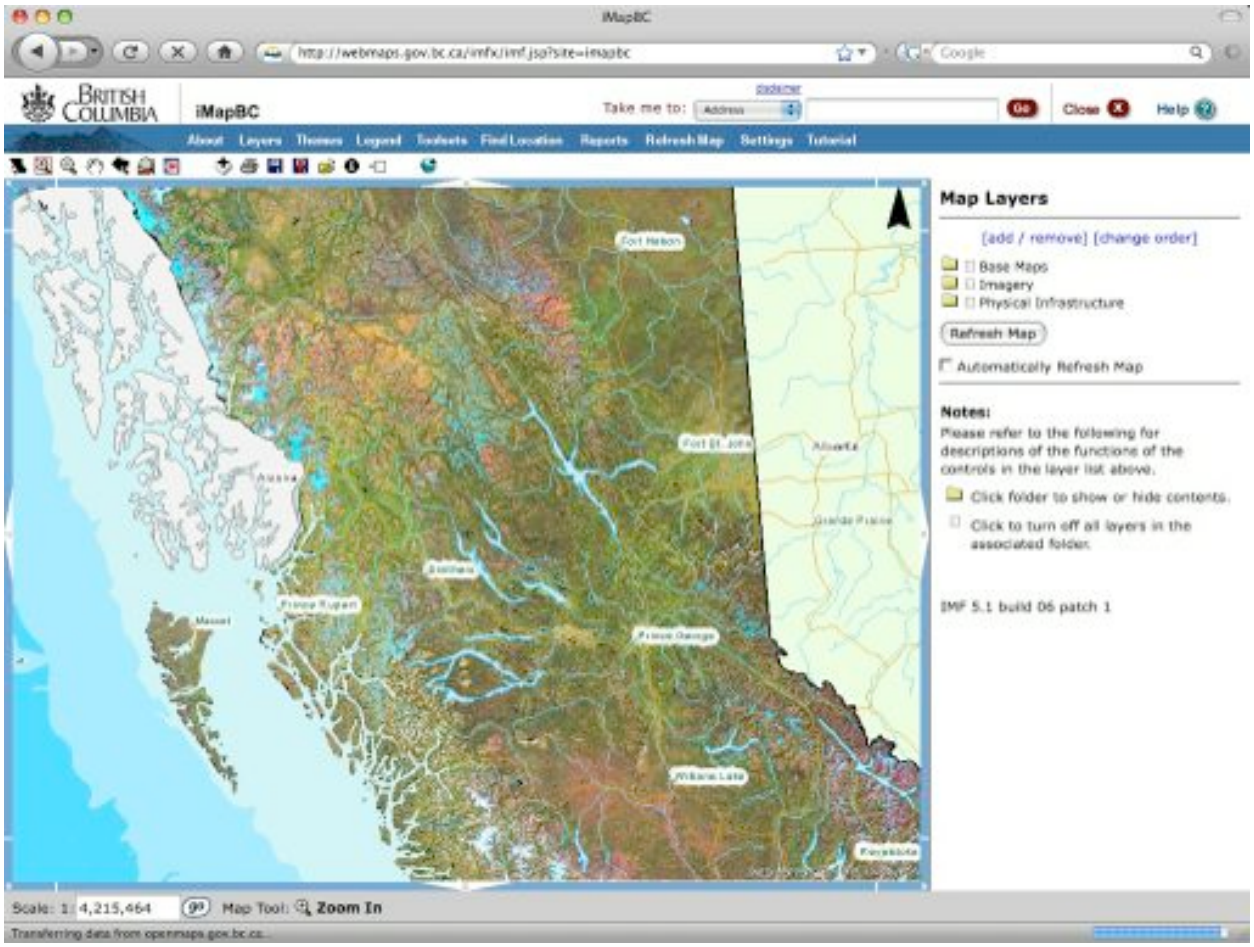
RoboCop

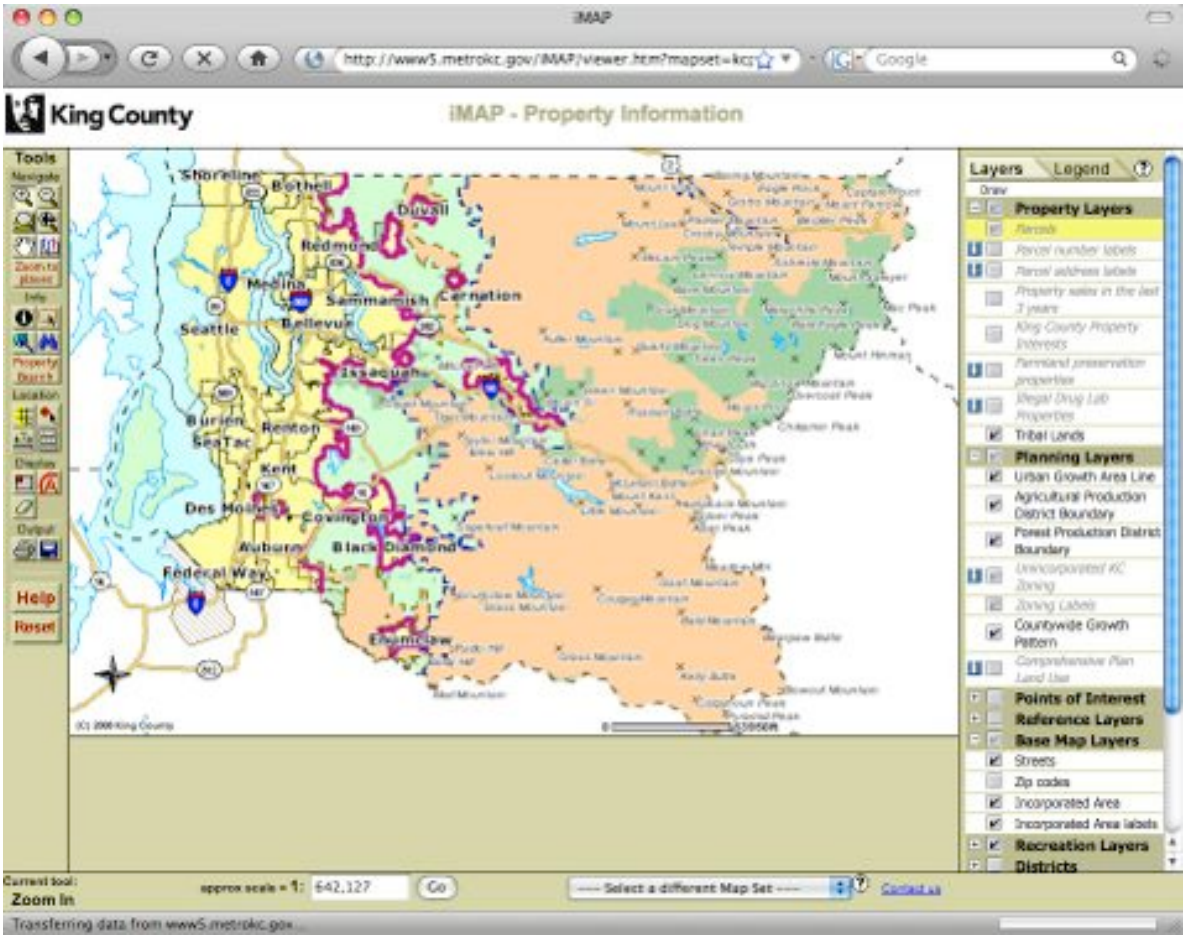
Public Service in the Internet Age

Dennis invited me here to talk about how government
and (to a lesser extent) business can make use of
web mapping in their business.

And there is a temptation,
given that remit,
to show you a bunch of pictures like this...



And say, this organization has put their data online in a mapping framework...



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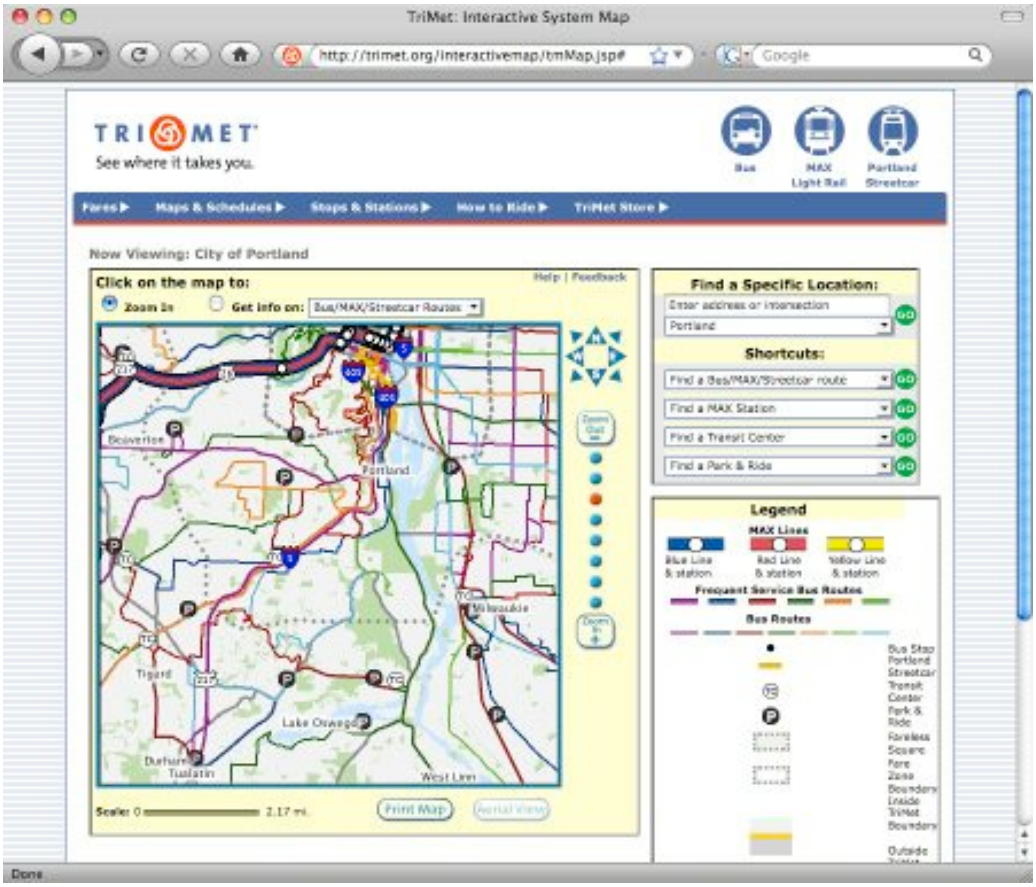
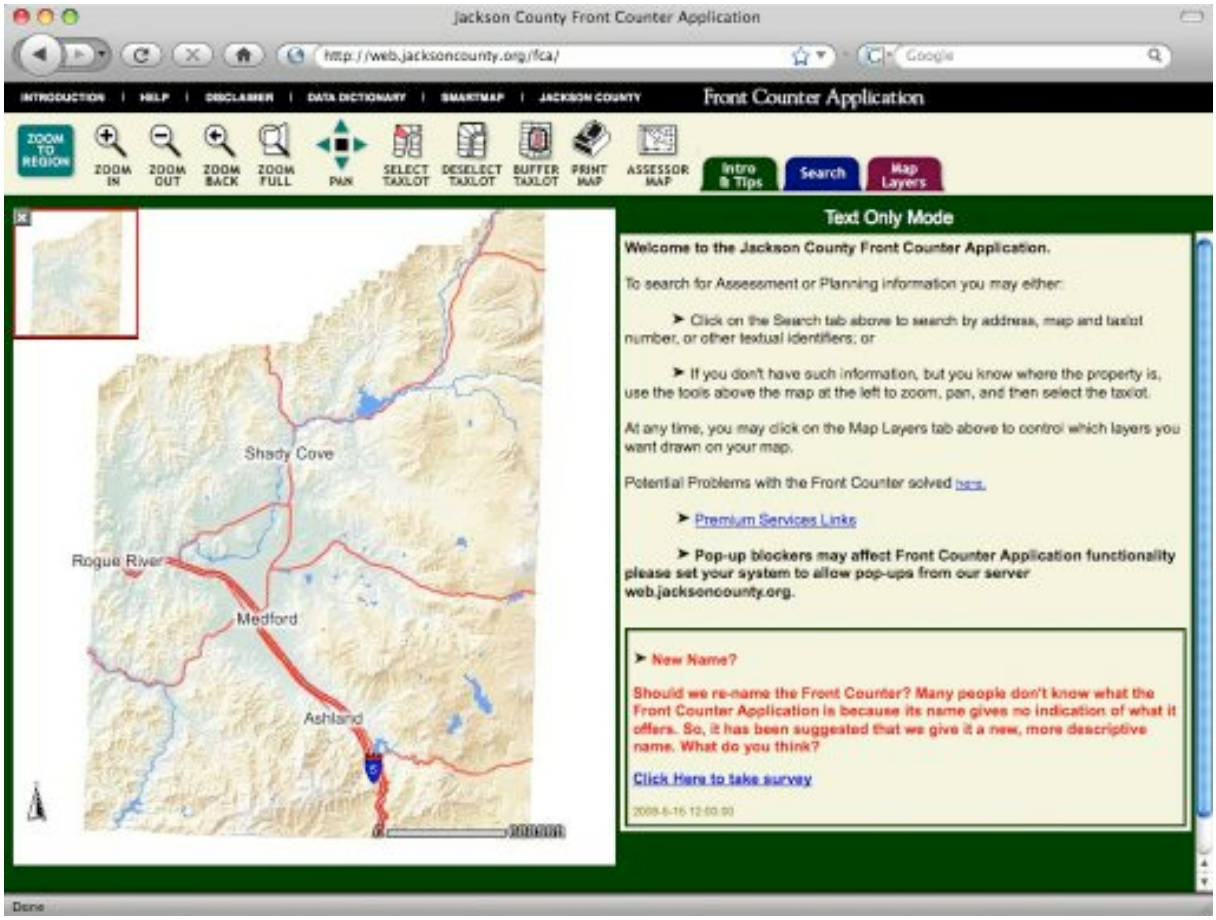


And this organization has put their data online in a mapping framework...



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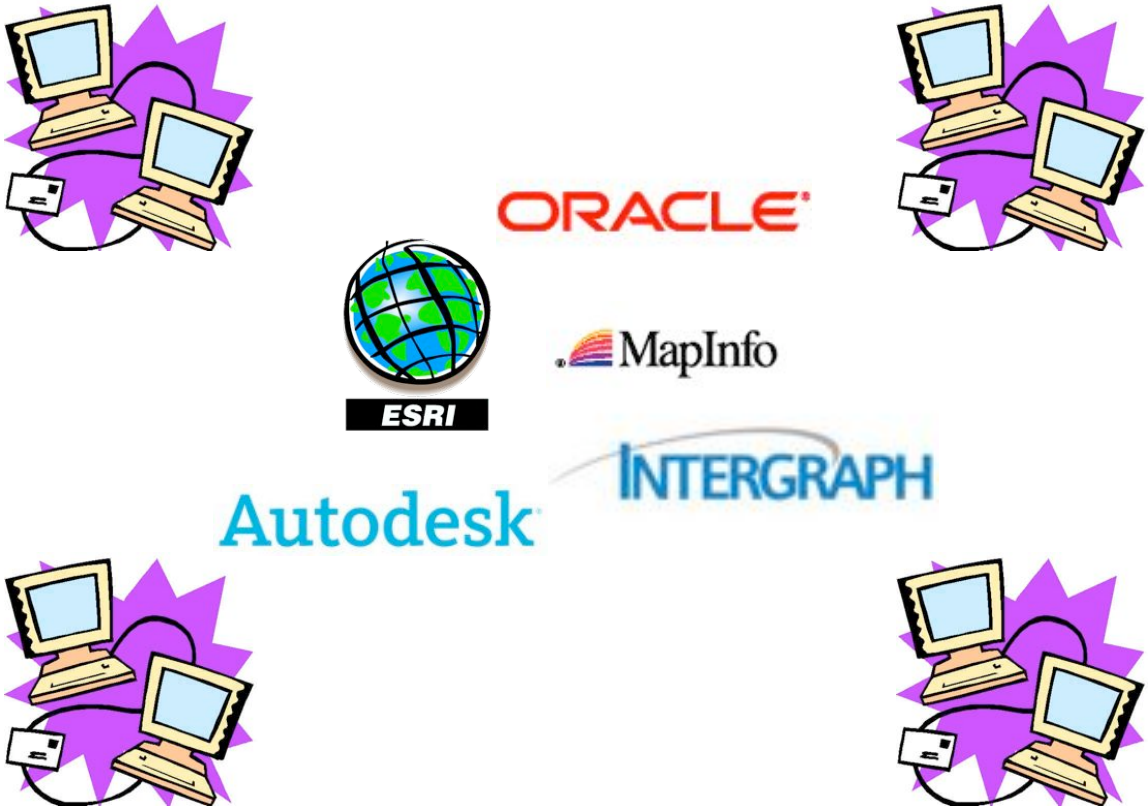
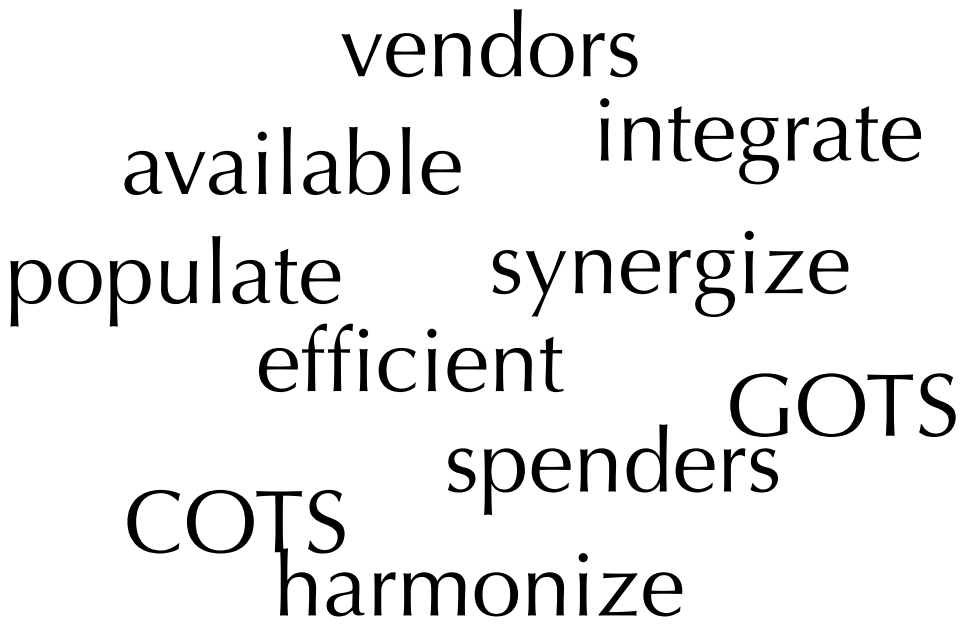


and talk about vendors
and
technology!!!



and how these applications are
making data more available to the public,
making government more efficient,
“meeting the needs” of the public.

I could talk about the need to
harmonize and
synergize and
integrate and
populate.

I could talk about
COTS and
GOTS and
vendors and
spenders.

I think it's bunk.

But,
for a variety of reasons,
I am not going to do that.

public service

What I am going to talk about is PUBLIC SERVICE,
and what public service means in a technological age.

Coming from me, this might seem an odd topic,
because until quite recently,
I was the president of a geospatial consulting company,
Refractions Research,
a paid-up member of the private sector,
a job I did for 10 years.

That’s me on the left.

But before I started Refractions,
I worked in the British Columbia government,
in the Forest Service.

I was,
in the hard language of right-wing policy institutes,
a "bureaucrat".

Bureaucrat is a term from mid-19th century France (of course),
referring to the "power of the desk",
"bureau" being "desk" and
"krat" being power.

the public to serve

But, for me, working for government was never about power,
and I have always preferred the more evocative terms,
"public servant", or "civil servant"

It describes a goal
"to serve"
and a natural constituency,
the "public",
or the "civilis" the citizenry,
which in our democratic societies is,
simply EVERYONE.

Now, I know what you're thinking...

“when is he going to get to RoboCop?”

You're thinking
"what does public service have to do with the internet"?

And the answer is
"the same thing public service has to do with a desk".

When you apply for a dog license,
you pass your application over a desk,
the civil servant passes your license back over the desk.

Now, for the bureaucrat,
the desk is a medium of control.
It holds the information you keep safe from the public.

For the civil servant,
the desk is a medium of communications.
In its drawers,
it organizes the information you are trusted to manage for the public,
and you pass that information over the desk.

We have gotten used to the transactional model exemplified by the desk.
The citizen brings something in, he takes something out.
Paper changes hands.

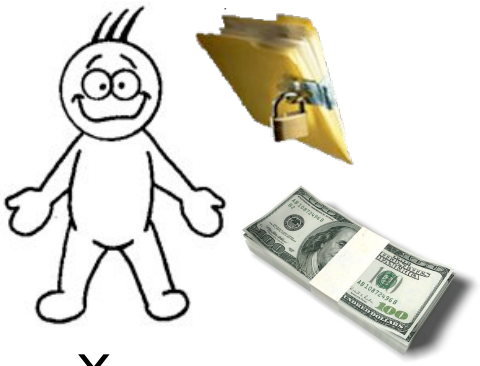
efficient transactions

The act of public service is reduced to the act of efficient transactions,
and our understanding of what good public service is
has been conditioned by the transactional model.

Let me rush to point out,
government is not unique in this sense.
Most organizations have been conditioned by the transactional model.
It is the dominant model of customer relationship in a huge number of industries.

the internet is a new medium

But,
the internet is a new medium of communication,
it replaces the desk,
and every field of human organization is having to re-examine how this
new medium affects their relationships with customers, their very business models.



You

Them

For example,

The music industry had a perfectly good business model before the internet.
You gave your money to them, and they gave you a CD.
The old transactional model in action.
One point of authority and control, mediating the transactions.

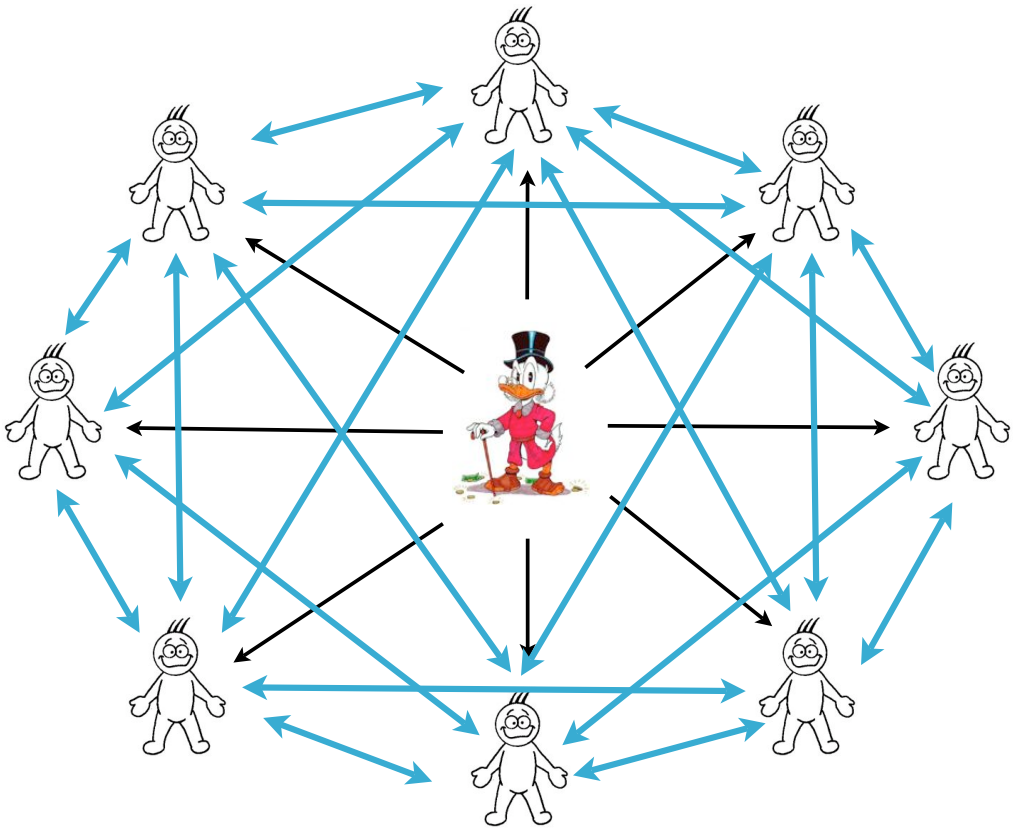
The internet (and transformative technology technology in general)
is like a Rohrsach Test.
You see the future that you want to see.

So, the music industry took a good look at the internet in the late 1990s...
and decided that it looked pretty promising.

With the right technology, it could be used to distribute virtual albums,
it could work exactly like their existing business model only better:
* their intellectual property would be more secure,
* no more illicit copying,
* and distribution costs would go to zero.

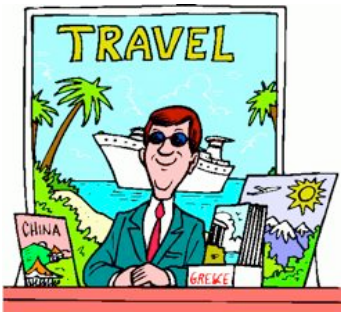
As it turned out, they were wrong about the future.
It didn’t work that way at all.

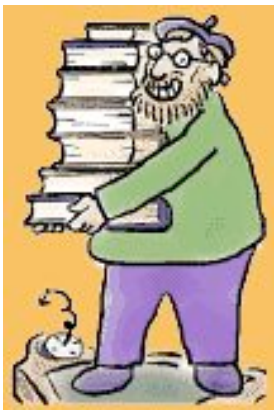
Napster was the future.



Instead of retaining the old one-to-many customer-to-distributor model,
the internet allowed many-to-many customer-to-customer links to grow,

File sharing blossomed,
Communities grew online,
  dedicated to doing things the music industry hated
And they couldn't do anything about it.





The music industry is hardly an isolated example.

Lots of industries have had their business processes and relationships with customers up-ended by the internet.

Have you... Talked to a travel agent lately?
Do you... Check your symptoms on the internet?
Do you... Buy books online?

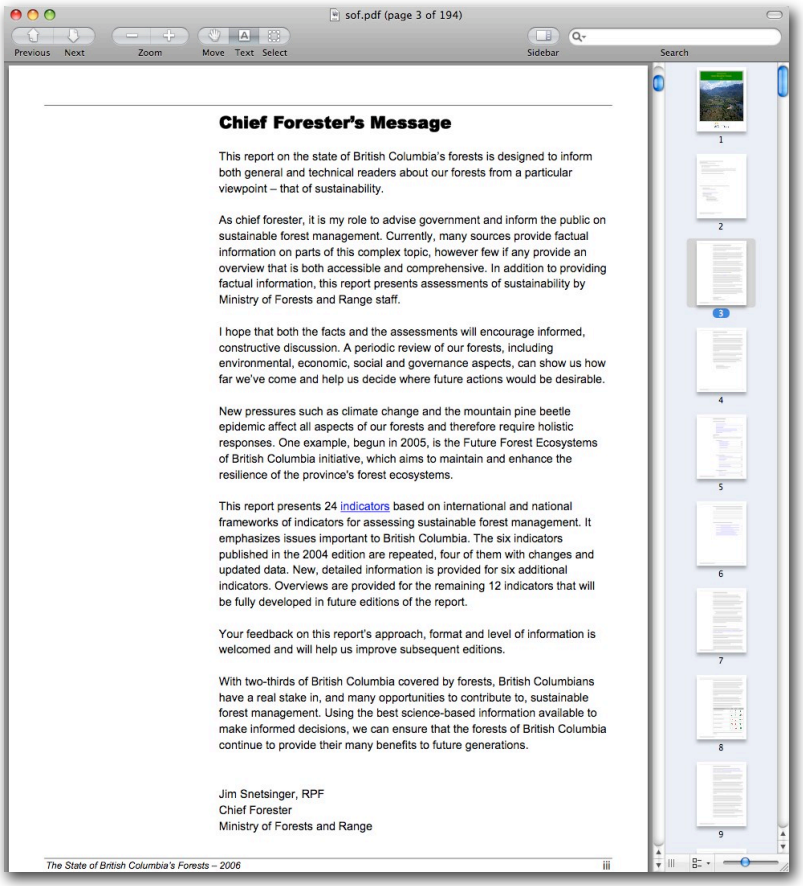
Government has not had its head in the sand,
it has been following along, as all organizations have,
trying to figure out the best way to engage.

eGovernment

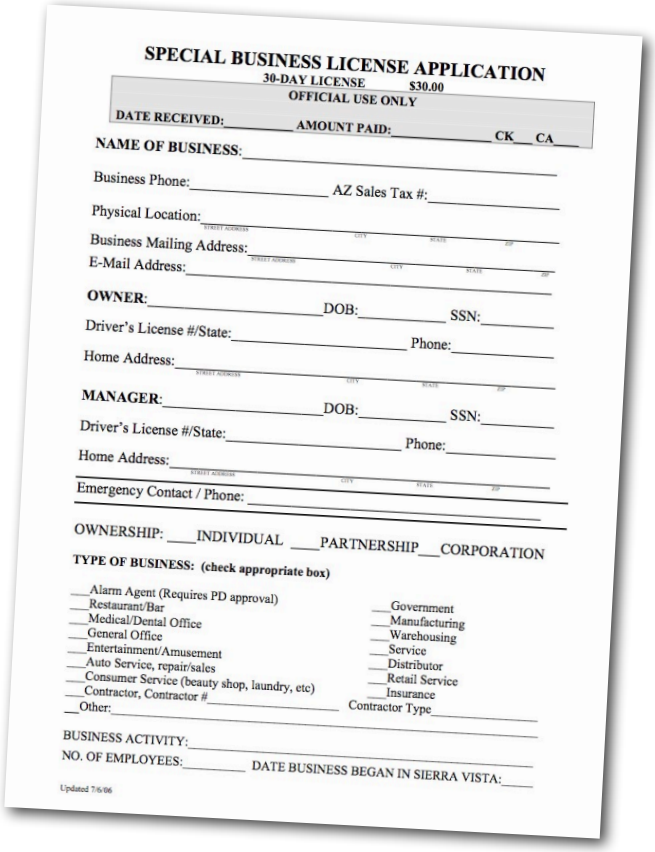
The first round of engagement took the form of eGovernment initiatives,
and by and large they looked like the music industry's first foray into the internet:

“we'll do our work the same way,
only using this internet thing.”

So agencies stopped publishing their annual reports and studies like this...



and started publishing their annual reports and studies like this...



SPECIAL BUSINESS LICENSE APPLICATION

30-DAY LICENSE $30.00

OFFICIAL USE ONLY

DATE RECEIVED:_____ **AMOUNT PAID:**_____ **CK**___ **CA**___

NAME OF BUSINESS:_____

Business Phone:_____ AZ Sales Tax #:_____

Physical Location:_____
STREET ADDRESS CITY STATE ZIP

Business Mailing Address:_____
STREET ADDRESS CITY STATE ZIP

E-Mail Address:_____

OWNER:_____ DOB:_____ SSN:_____

Driver's License #/State:_____ Phone:_____

Home Address:_____
STREET ADDRESS CITY STATE ZIP

MANAGER:_____ DOB:_____ SSN:_____

Driver's License #/State:_____ Phone:_____

Home Address:_____
STREET ADDRESS CITY STATE ZIP

Emergency Contact / Phone:_____

OWNERSHIP: ____INDIVIDUAL ____PARTNERSHIP___CORPORATION

TYPE OF BUSINESS: (check appropriate box)

___Alarm Agent (Requires PD approval)
___Restaurant/Bar
___Medical/Dental Office
___General Office
___Entertainment/Amusement
___Auto Service, repair/sales
___Consumer Service (beauty shop, laundry, etc)
___Contractor, Contractor #_____
__Other:_____

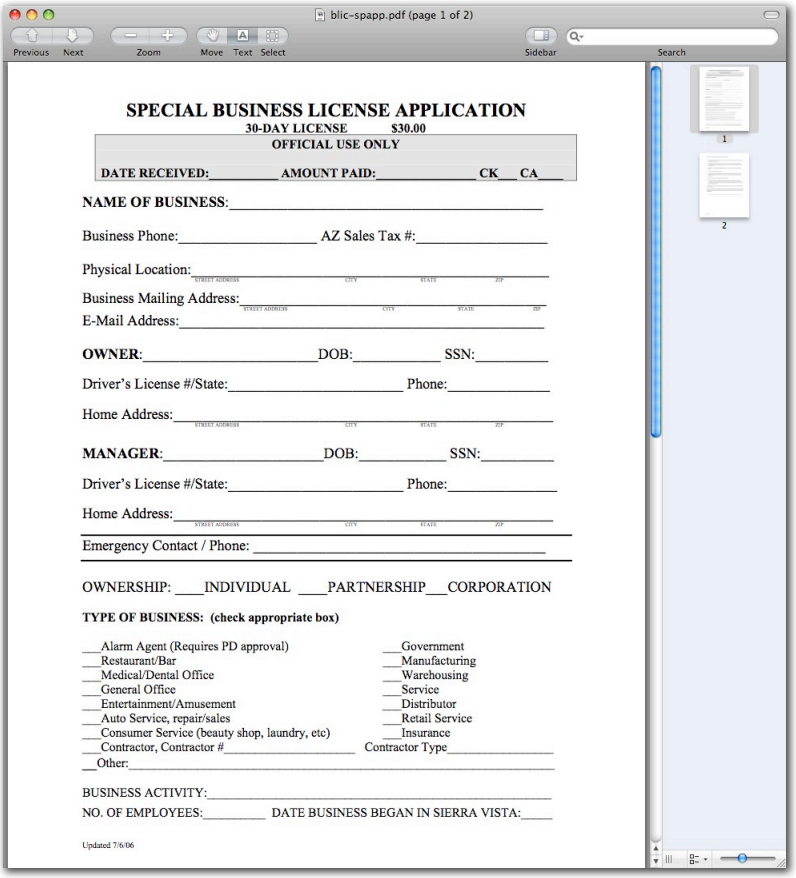
___Government
___Manufacturing
___Warehousing
___Service
___Distributor
___Retail Service
___Insurance
Contractor Type_____

BUSINESS ACTIVITY:_____

NO. OF EMPLOYEES:_____ DATE BUSINESS BEGAN IN SIERRA VISTA:____

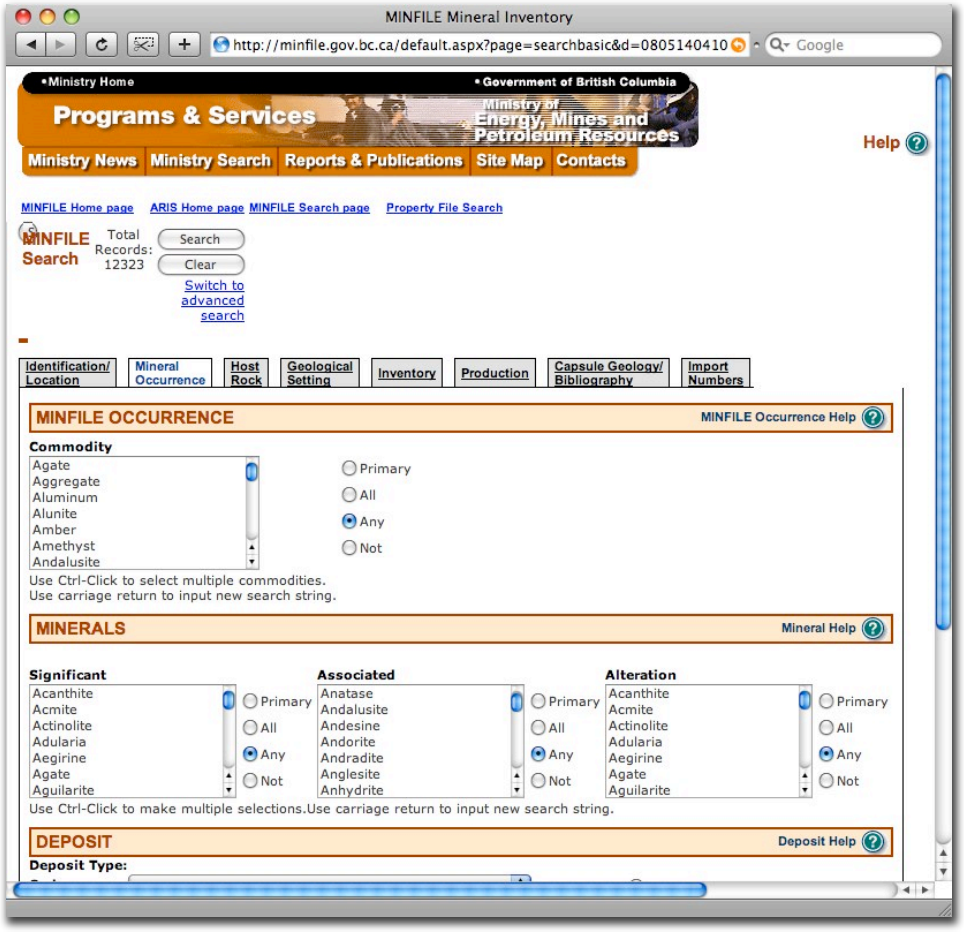
Updated 7/6/06

They stopped accepting applications like this...



and started accepting applications like..
well
this.

Some organizations even went so far
as to transition from processing queries using this interface...



to processing queries using a straightforward web interface, like this.

I know what you're thinking...

“but what about RoboCop?”

You're thinking, "what is the philosophical underpinning of what you're saying?".

The philosophy I am creeping up on is this:

The internet is a new medium of communication,
and understanding that newness and the
cultural effect of the internet is key to using it as
an effective communications channel.

Every time a new medium arises, the need to
re-tool old communications strategies arises, because...

“the medium is the message”

Marshall McLuhan, the famous Canadian media theorist,
said that the medium of communication is as important to the way
people perceive communication as the content of the communication itself.

If we want to be effective in how we communicate,
we have to tailor our messages to the medium of communication.

plays

television

movies

Plays, television and movies are all audio-visual dramatic media.

But the script for MacBeth
is not the same as the teleplay
is not the same as the screenplay.

The content has to be adapted to the medium,
even though the media are very similar.

Marshall McLuhan
1911-1980

"there can only be disaster arising from unawareness of the causalities and effects inherent in our technologies"

Marshall McLuhan said that he was
more interested in "percepts" than "concepts",
that is, more interested in how our perception effects our
understanding of and formulation of ideas,
than in the ideas themselves.

At the empirical level of consciousness at the level of raw perception,
the medium is the message,
whereas at the intelligent and rational levels of consciousness,
the content is the message.

We like to think we can separate our processing of percepts from concepts,
but the continued solvency of the advertising industry
is inarguable empirical proof that we can't.

We see new media changing our modes of communication
and ways of understanding each other all the time.

Probably everyone in this room is old enough
to see SMS texting as an alien form of communication,
or at best a clumsy emulation of the telegraph,
but people 10 and 20 years our junior have
fully integrated it into their communication facilities.

The importance of understanding the medium you are working with,
and tailoring your approach to that medium, cannot be overstated.

The classic example is the presidential debates of 1960.

At the time, television ownership was around 85%, not quite universal,
and the debates were still broadcast widely on radio.

Famously, Jack Kennedy won the 1960 presidential debates...
but only if you asked the people who watched on television.

If you asked the people who listened on the radio, Nixon won.

Same content, different media, different results.

Kennedy's message was fit for television:
not only did he sound good, he looked good.
Tanned, vigorous, presidential.

Nixon sounded good,
but his message was lost because of the bad visuals:
sweaty, dark, nervous.

lexandria Daily Town Tal

ALEXANDRIA-PINEVILLE, LA., TUESDAY, NOVEMBER 8, 1960

Two Sections Twenty-two Pages

VOTER TURNOUT PRE

vis Signs 'Interposition' A

One of These Will Be Elected U. S. President Today

U.S.

Succ

WASHIN
breaking tide
carry the natio
struggle betwe
It would
definitely know
Americans than
contest.

The voters also
the 100 members
Senate, all 437 H
27 governors, and
other state and lo
First returns in
al race came
a handful of scatte
munities in the No
Mid-West. They
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and were insuffici
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Governor
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The lesson is,
if you don't tailor your message appropriately to the medium,
you risk having your message lost altogether.

And that leads to defeat.

However,
if you work at refining your message,
and learn the new media,
you can still prevail.

"All the News That's Fit to Print"

The New York Times

LATE CITY EDITION

VOL. CXXIII.....No. 43,166 NEW YORK, FRIDAY, AUGUST 9, 1974 15 CENTS

NIXON RESIGNS

HE URGES A TIME OF 'HEALING'; FORD WILL TAKE OFFICE TODAY

'Sacrifice' Is Praised; Kissinger to Remain

The 37th President Is First to Quit Post

SPECULATION RIFE ON VICE PRESIDENT

POLITICAL SCENE SHARPLY ALTERED

Rise and Fall
Appraisal of Nixon Career

JAWORSKI ASSERTS NO DEAL WAS MADE

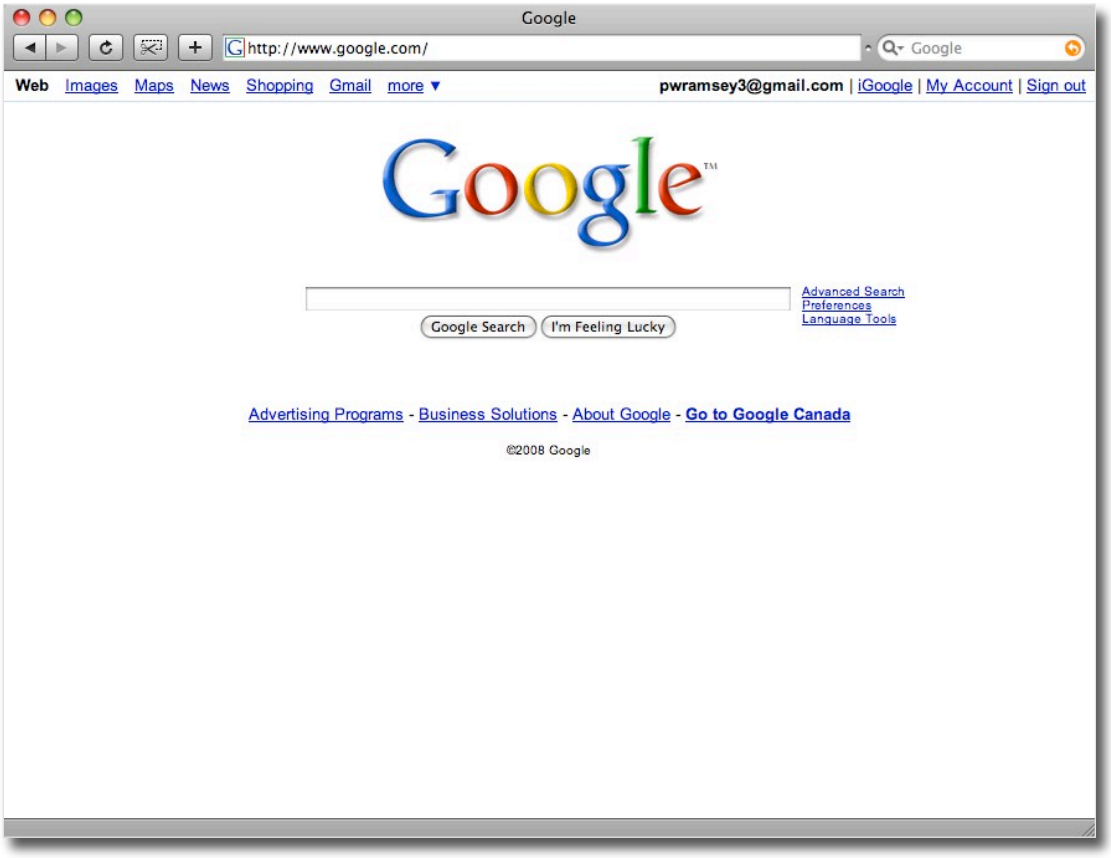
Just don't get cocky.

new medium == new rules

So, McLuhan says that the medium deeply effects communication,
which implies that you should tailor your communication to the
medium for best effect.

But,
what are the rules for the internet?

In particular,
what should public organizations do?



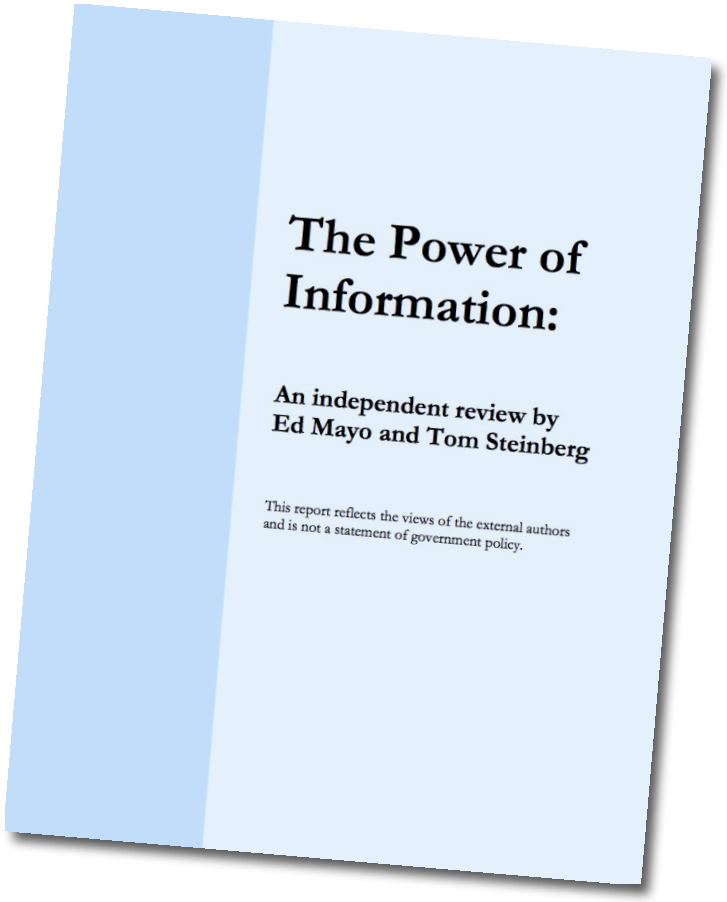
Clearly some organizations “get it”.

And some don’t.

best practices for the public sector

But what are the best practices for the public sector.

Fortunately, this is question that other public services have been grappling with.



Cabinet Office

Last year, the British government recognized
that there was something retrograde
in the way they were approaching the internet,
and they commissioned a study
of how government can improve public service
using this new medium.

This wasn't a low level study,
it was commissioned by the Cabinet Office.

The equivalent US organization is the OMB,
the federal Office of Management and the Budget.

The authors were formerly highly placed policy advisors
for the Labor government, (Tom Steinberg and Ed Mayo)
and the work was done in concert with the
Prime Minister's own Strategy Office.

The report is titled "The Power of Information"
and among other things they found that...

online communities increase knowledge which improves outcomes

In medical studies of breast cancer and HIV patients,
participants in online communities understand their condition better
and generally show a greater ability to cope.

In the case of HIV, there are also lower treatment costs.

healthy online communities beget healthy offline communities

Studies of ‘wired’ local communities demonstrate
that there are more neighbours who know the names of other people on their street
than in unwired communities.

communities will self-police
if given actionable intelligence

Sharing restaurants' food safety information in Los Angeles
led to a drop in food-borne illness of 13.3%
(compared to a 3.2% increase in the wider state in the same time frame).

The proportion of restaurants receiving 'good' scores more than doubled, with sales rising by 5.7%.

10 new groups of citizens

The report also identified two new groups of citizens..

01 people who take part in online communities

10 people who re-use information to build new tools and services

The first new group comprises people who take part in user-generated websites

- The first group is represented by the folks who login and use MumsNet, a community brimming with shared experience, and over 10K postings a day. A columnist for The Times of London (Janice Turner), wrote recently that she could not “see how the Government could improve on Mumsnet. Indeed, the fact it is run from one woman’s back bedroom in North London makes it infinitely more trustworthy.”

The second new group is people who re-use information to build new tools and services (including government)

- The internet company uSwitch, founded in 2000, helps people compare utilities providers. It combines private sector information with quantities of public sector information to deliver its services. It was recently bought for over £200 million.

- At the other end of the scale is mtraffic, a minimalist yet highly useful site for accessing the BBC’s traffic reports on a mobile phone, which registers over 10,000 visits a month. It was built as a volunteer project by programmer Tom Dyson, one of the 1,300 members of the BBC’s Backstage project. Backstage uses non-commercial data licences to encourage a community of data mashers who exist outside the commercial market.

make public information free and freely available

The report made 15 recommendations, all of which were accepted by the government.

Some are quite specific to the UK government, but the general thrust of the recommendations can be summed up in three general statements.

First, make public information free and freely available.

- The UK generally has a public domain data policy, but it doesn't apply to the trading funds who, sadly, hold much of the interesting information, including the geospatial information.
- The UK has "trading funds" essentially independent arms of the government, some of which hold economically valuable data and charge for access.
- The Ordnance Survey (mapping agency) the Statistics agency and others, all have data charging policies, and the authors recommended those policies be studied.
- They recommended that a policy of "marginal cost" be applied to all data pricing in public bodies including the trading funds, if the study found no harm would be caused by it.
- They recommended the investigation of non-commercial re-use licenses by the trading funds.
- They recommended that regulatory information be published, in open formats and with licenses that permitted reuse.
- They recommended that Ordnance Survey immediately make its data available via a service-oriented system like Google Maps (they have, it is called "Open Space")

work with online communities, not against them

Government should work WITH online communities, not AGAINST them.

- They recommended that government consult with the operators of existing user-generated sites before building new sites that might overlap.
- They recommended that departments study user generated sites in their areas, and shut down government sites that were not required, or modifying them to feed or complement the user generated sites.
- They recommended that new government sites include user fora and other ways for users to participate with the content of the site.

give civil servants the freedom to join public fora in an official capacity

They recommended that policy should be reviewed to clarify how civil servants should respond to citizens seeking government advice and guidance online

- a medium where information flows quickly
- a bi-directional medium of communication
- an information medium of communication

All these recommendations aim at making government more sensitive to the medium of the internet.

- A medium where information flows quickly, so add quality government information to the flow will improve the decisions the public is making
- A bi-directional medium of communication, so open the door to information to come into government from online communities and feed online communities with good information
- An information medium of communication, so establish the ground rules for civil servants to join online conversations, which have a different character than traditional media like letters and phones

“RoboCop?!?”

This is all sounding very abstract, and I know what you're thinking

You're thinking "how about some examples?"

Before I get into examples, I want to present a hypothetical use case to you.

Right now, cell phone penetration in the USA is over 82%.
In a few years, smart phones like the iPhone will have similar penetration rates.

Basically, everyone is going to be walking around with a small computer in their pocket.

I don't have one yet, but, when I get my iPhone, I would like it to do the following things:

- Tell me in the morning if I need to put the garbage or the recycling out.
- Warn me when there is going to be road maintenance on my drive to work.

Think about what is needed to make that a reality.

on the internet
but not
part of the internet

Government has been pretty good over the last 10 years about getting **on** the internet.

Each branch, each ministry has built their own portal.

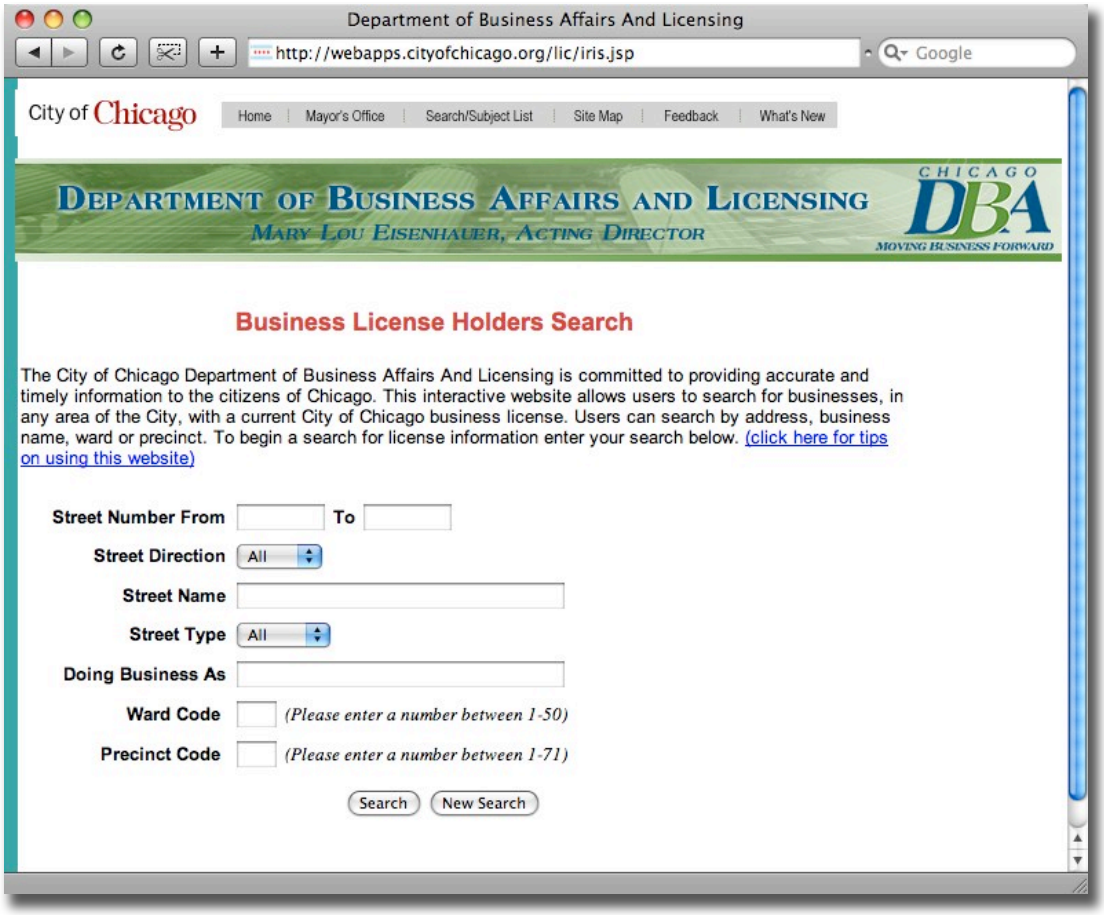
They've each done it their own way.
The best way, the right way.

But each one slightly different.

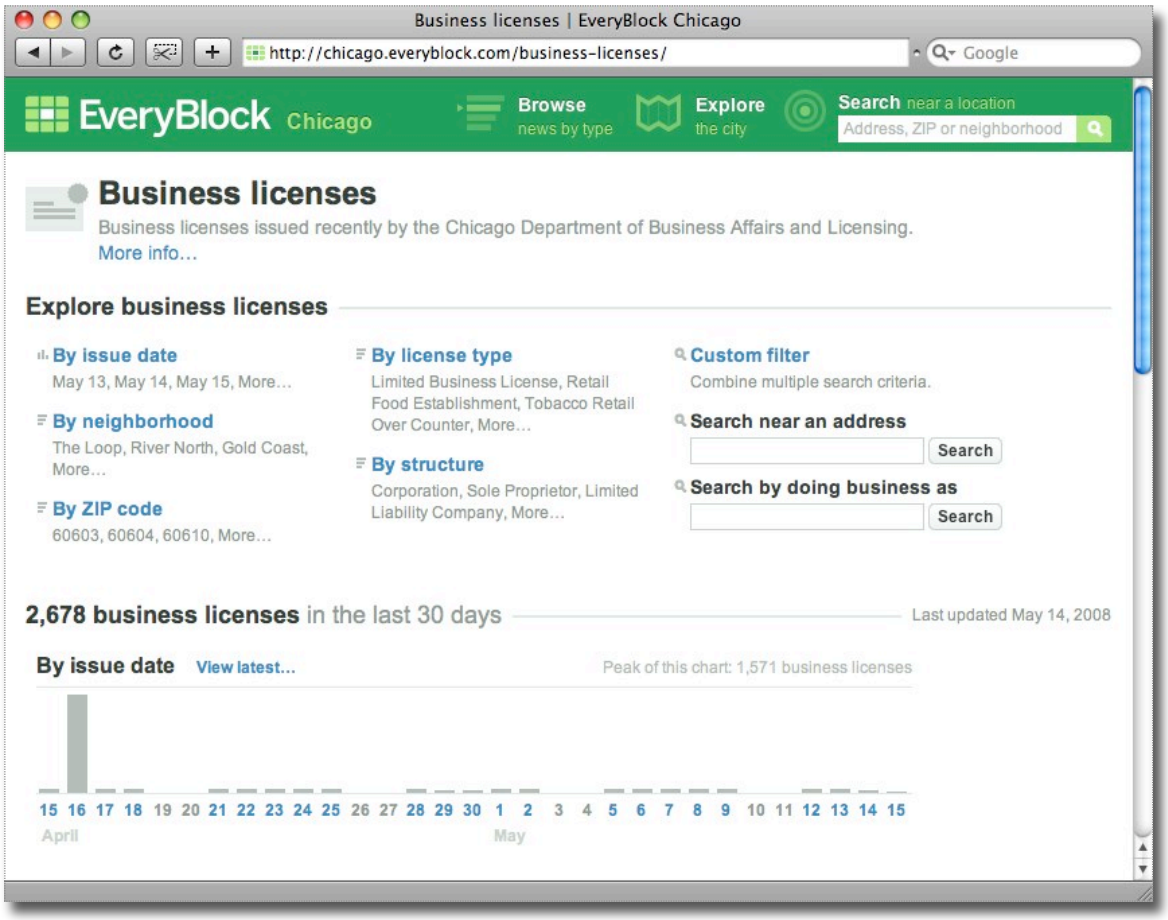
So from an information architecture point of view,
the outside of a large organization like a city or a state
has ended up looking like this.

Every user interface is different,
and the data is hidden behind web interfaces (usually poor)
designed to allow humans to query,
but not designed for automatic data extraction.
Sometimes designed explicitly to discourage it.

So, anyone who wants to use the government information computationally,
has to resort to "screen scraping",
turning the human readable outputs of the web interface
back into consistent machine readable inputs for their own database.



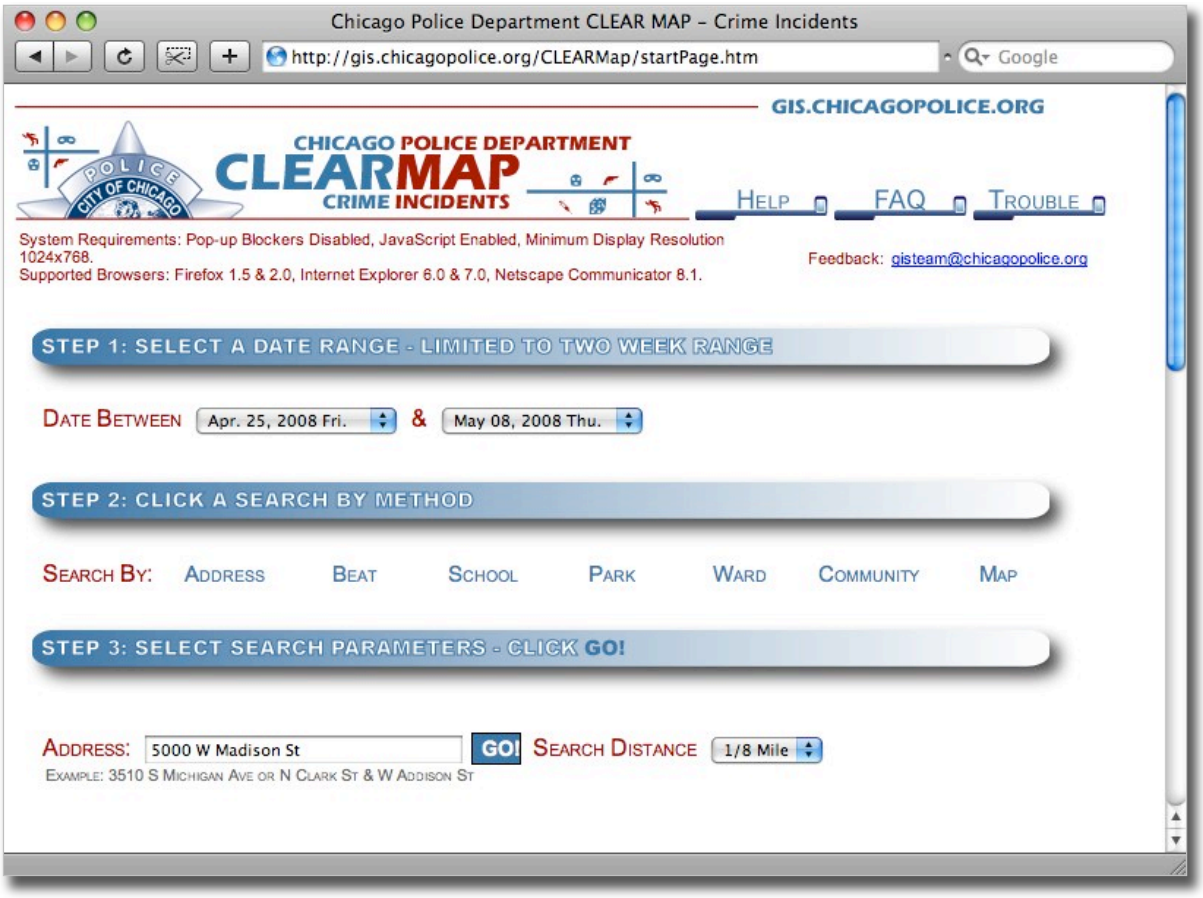
Here is the Chicago business license database,
as presented by the Department of Business Affairs...



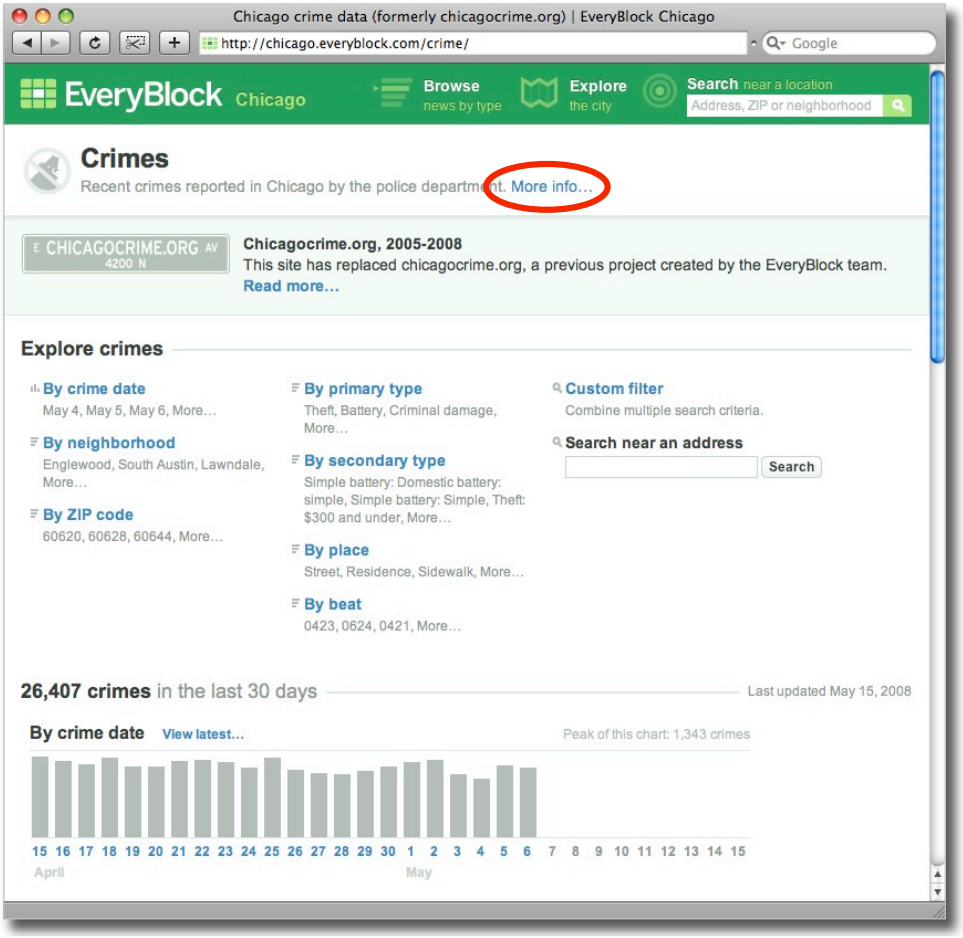
And here is the same database presented by Everyblock

Everyblock is a hyper-local new site,
aimed at providing a web “newspaper” for every block in Chicago, San Francisco, and New York.

In order to get news of that granularity,
they are mining every source of information they can find,
and government information is a key source.



Here is the crime information provided by the Chicago police department...



And here is the same database presented by Everyblock

By the mere application of hundreds of hours of manpower,
building scrapers, and harmonizing data models,
Everyblock is able to convert
orphaned and incomprehensible public domain data
into usable public domain data.

Notice that no matter what the topic area,
Everyblock presents the same user interface paradigm.
They also provide easy to follow links back to the source pages,
which is why it was so easy for me to find these examples for you.

But it is not easy for them,
they spend a lot of time scraping
or making side deals for data access with agencies.

Screen scraping is the universal, visceral response to being presented with a webstacle.

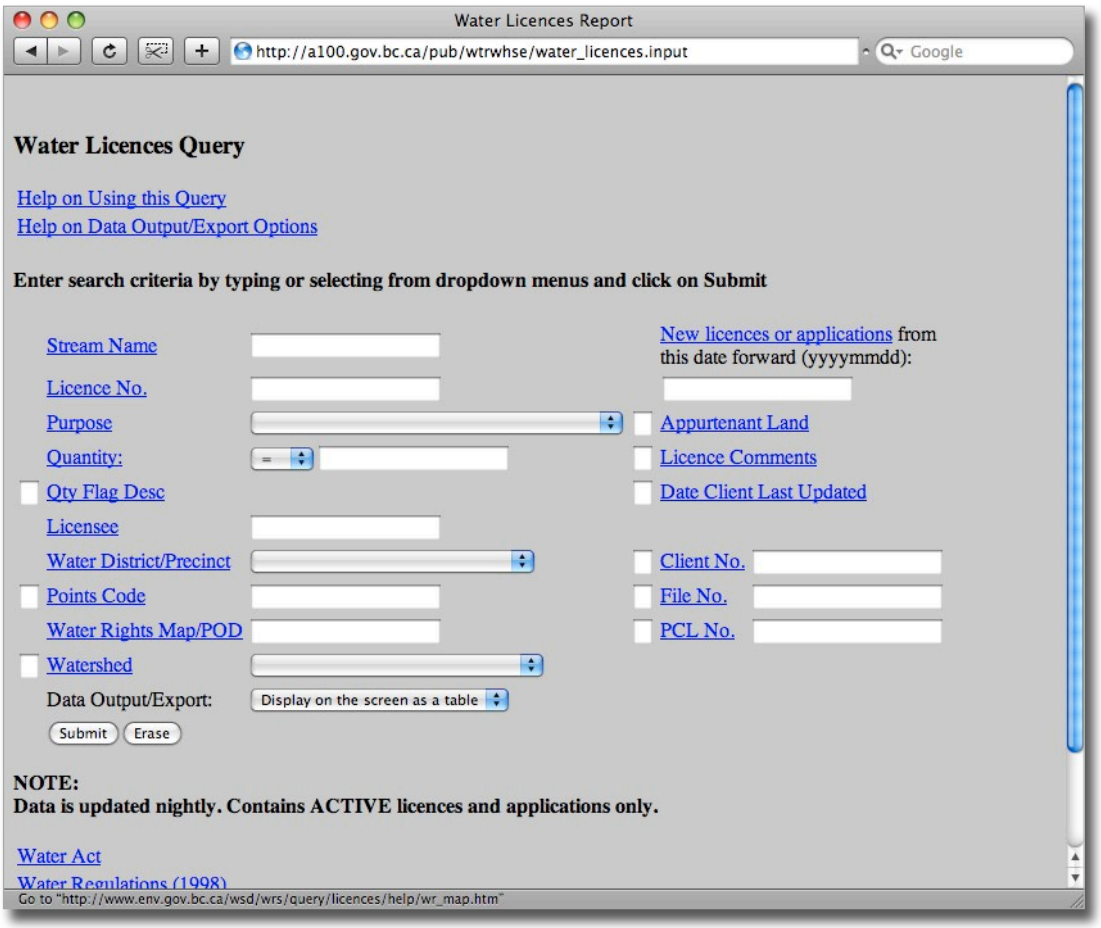
A “webstacle” is the use of the Internet to avoid providing data to users.
This is often the unintended result of good intentions,
but at times webstacles are used to inappropriately privatize public data.

Everyone runs into webstacles from time to time.

For me, the favorite is the BC water licensing information.

The Water Licensing Branch of the British Columbia government provides the water "points of diversion" as a shape file,
and all the rest of the information about the licensee and volumes, terms and dates of issue, well... they don't provide all the rest of the information.

The points just have a license number.
That’s it. Point and license number.



But that's OK, because they also have a handy web site!

And you know how the story goes from there.

Why are we **scraping public data off the web?!?!**

Why aren't we just downloading it directly, as ***data?!***?

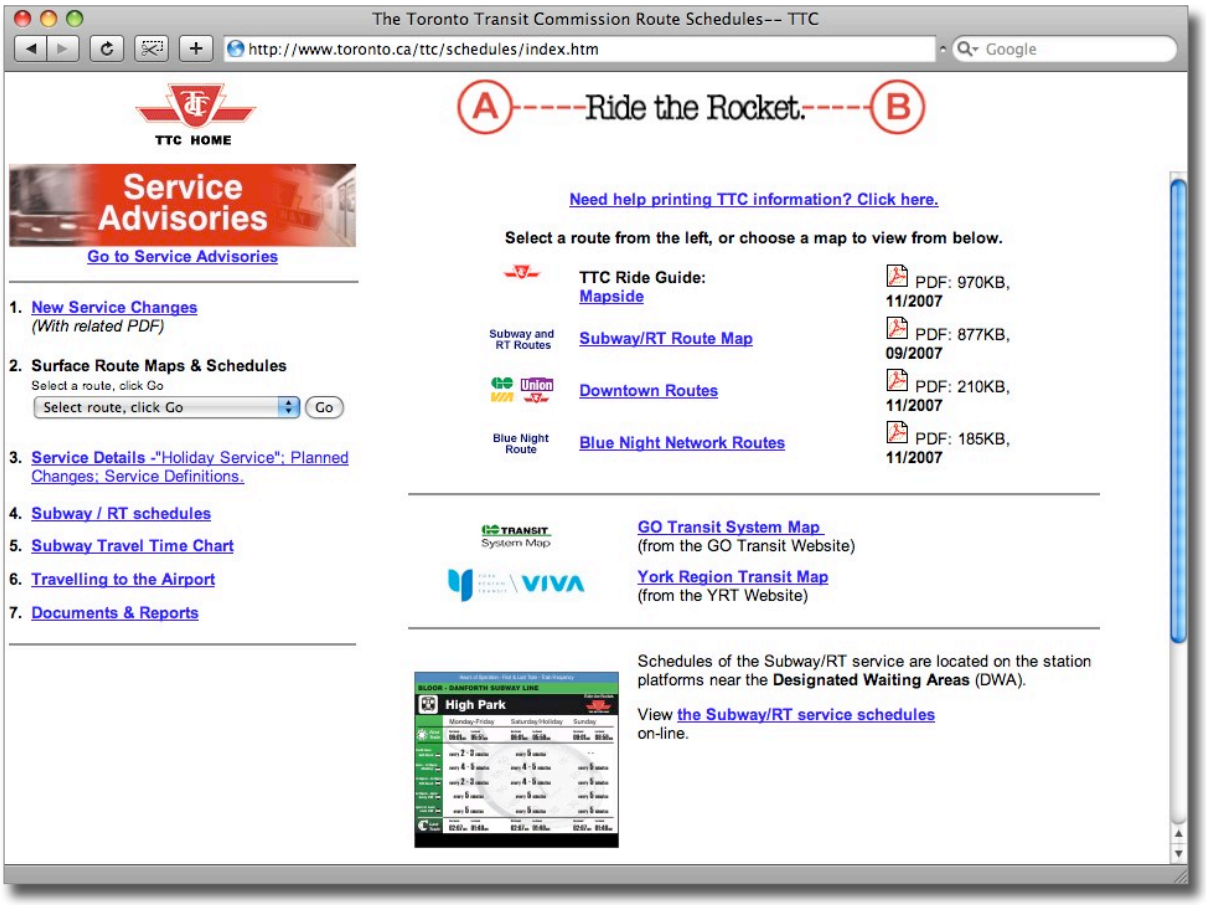
What it comes down to organizationally is this:

Most organizations are ***on*** the internet

They are at the game.

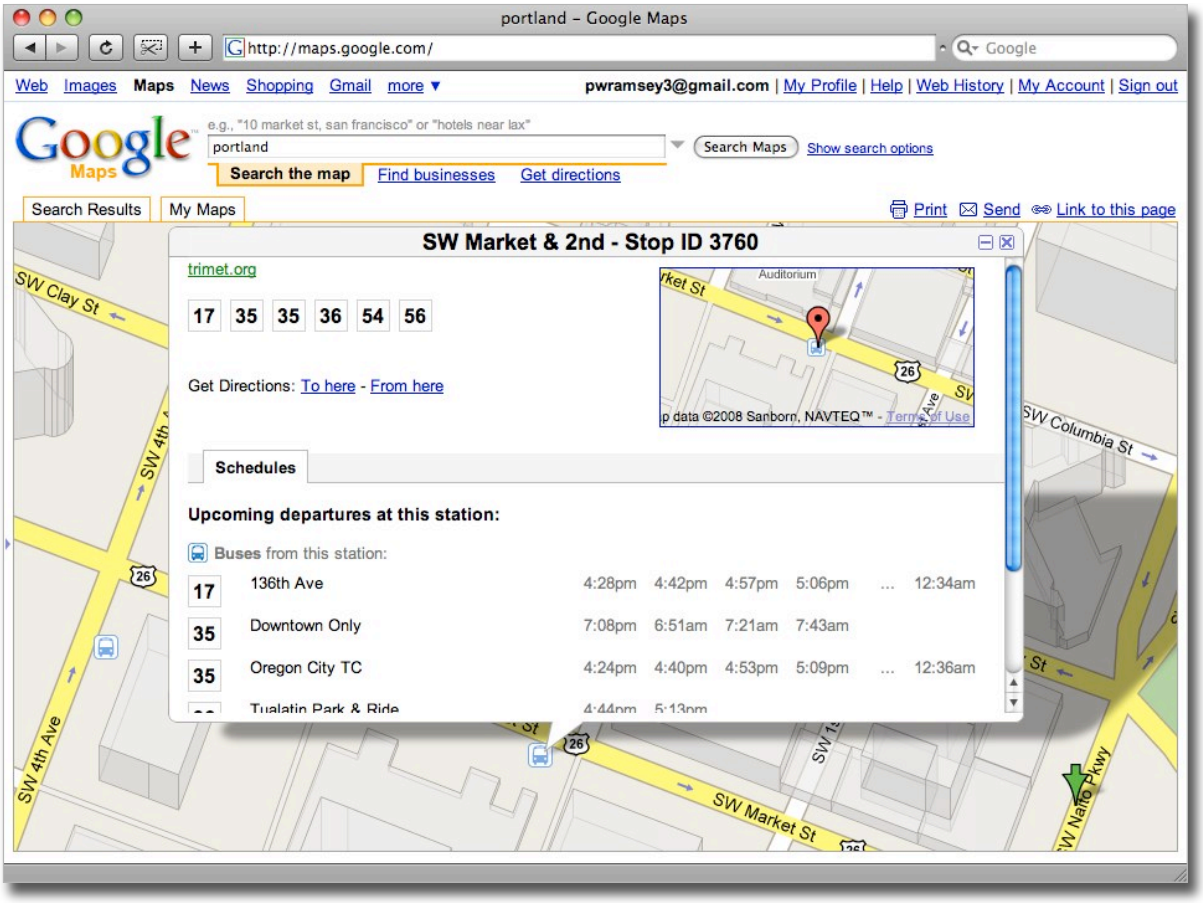
But they aren’t playing in the game.

Only a few have gotten to the next step, and become ***part of the internet.***



The Toronto Transit Commission is **on** the internet.

I can view schedules. I can download route maps.



Portland's TriMet is **PART OF THE INTERNET**.

The bus stops and schedules for the Portland metro area are
embedded **right in Google Maps**.

Lots of other transit authorities are now in Google Maps, but TriMet was the first.

They were on the cusp of developing a new mapping site around the time that
Google Maps came out, and
rather than trying to copy it or beat it,
they approached them and asked:
"have you ever thought about transit?"

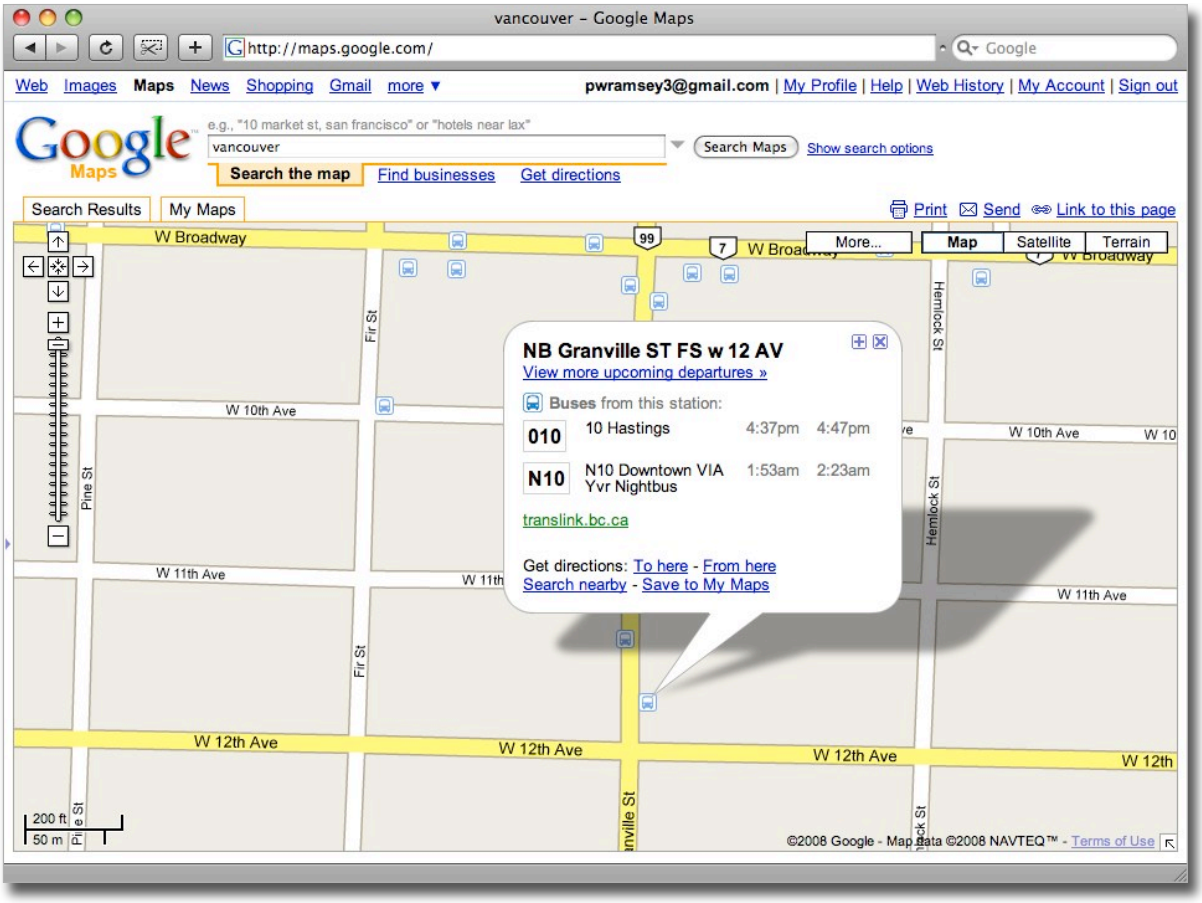
Google Transit Feed Specification

http://code.google.com/transit/spec/transit_feed_specification.html

And the Google folks said
"well, no, but it sounds interesting..."

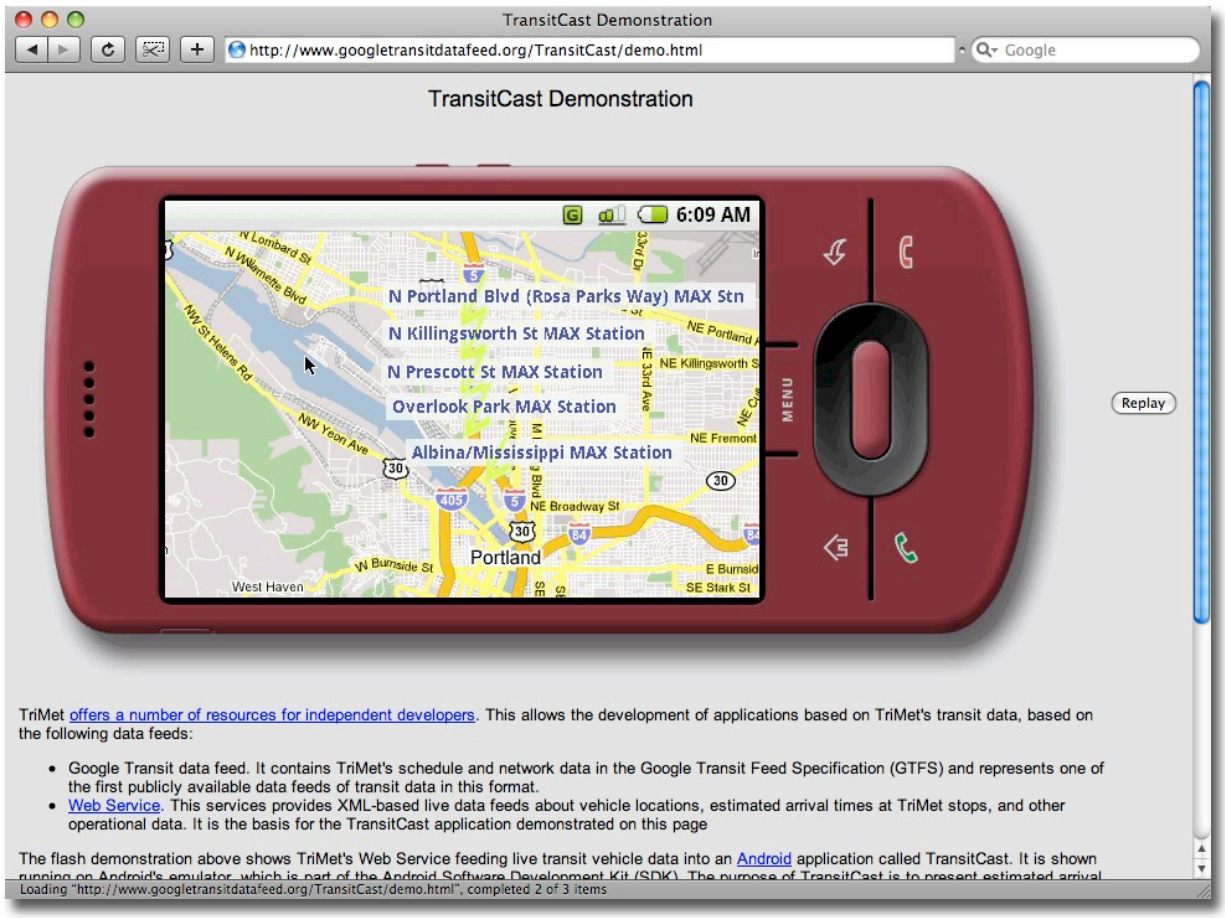
The result was a collaboration that standardized the publication of transit schedule information,
into the "Google Transit Feed Specification",
which is now being used by lots of other organizations.

So I can see Vancouver busses, Eugene busses, Seattle busses, and more.



Note how the user interface is consistent,
so my bus information looks the same in Vancouver or Portland or Eugene.

And Google did ***not*** have to screenscrape the transit authorities,
the way Everyblock does for the municipal information.



For TriMet, this is more than a deal with Google,
because they make their schedule data available publicly,
as a simple downloadable file.

Update one file,
and all the dependent systems are updated automatically
when they download the new file.

Everyone can download the same files that Google downloads.
And lots of other organizations are doing so!

Here are some folks using the TriMet transit feed to drive a smart phone application... hmmm...

amazon.com

"If the new computer set up allowed folks inside to be more creative and independent, why not open it up to outsiders, too?"

Opening up previously private corporate databases to the world is an old idea that was popularized by Amazon.com.

The story goes that Amazon built some new internal infrastructure allowing their developers standardized access to the various statistics databases, basically web services, and the result was a whole bunch of great new business intelligence bubbling up from all different parts of the organization, as folks used data that had previous been hidden from them to answer previously unanswerable questions.

And Jeff Bezos said 'If the new computer set up allowed folks inside to be more creative and independent, why not open it up to outsiders, too?'

So they did.

Consequently, in 2002,
Amazon began offering outside software and website developers access to the same web services:
data like pricing trends, and sales numbers, gradually adding more and more.

Now Amazon is in a situation where it sees constant innovation from more than 200,000 outside web developers, up 60% from a year ago.

Becoming part of the internet is almost a transcendent process,
because it involves a
difficult
discipline
of self-denial.

You have to admit
to yourself
that you
might not be the person
who grasps the highest purpose
for your data.

“but it’s **my** data!”

Come back to your center...
Breathe in...
Breathe out...

it’s the public’s data

you might not be the
person who grasps the
highest purpose for the data

First of all
  It's the public's data!
and second
  you might not be the person
  who grasps the highest purpose
  for the data.

ok, if not me, then who?

Once you have reached nirvana, the next question is:

"if I am not the person who grasps the highest purpose for the data,
how do I get it into the hands of the person who does"?

As usual, Hollywood has the answer.
"If you build it, they will come."

Or, for the internet era,
"If you make it available in a machine readable form,
they will download it."

(No, not the 1919 Chicago White Sox,
but somebody.)

but, what to build?

So, we want to get our information into the hands of the people we don't know,
but who are going to find its highest purpose.

How do we do that?

We aren't Amazon.com,
we're geospatial people.

Web 2.0

You're all from the Bay Area,
so this term should be all too familiar to you: "Web 2.0".

Somehow social networks hijacked the term,
and it got all bound up with friends lists and collaborative content,

and it has come to mean anything that venture capitalists will invest in this time around, but way back in 2005 it had a more technical meaning.

"Web 2.0" referred to the ongoing transition of the
World Wide Web from a collection of websites to a
full-fledged computing platform.

The move to computer-to-computer interactions,
the opening of full machine-readable access to databases,
the opening of APIs for machine writing to databases,
are all instances of Web 2.0 design.

GeoWeb

In spatial circles, the term "GeoWeb" is frequently used to describe the same thing.

If you have heard it before,
it was probably in the context of OpenGIS standards,
but there is no reason to be so restrictive.

The GeoWeb is computer-to-computer data exchange, with a spatial component.

The actual exchange format is irrelevant.

Now, I know what you're thinking...

Pie in the sky, right?

But
the GeoWeb already exists,
in protoplasmic form.

Take the USGS for example, please.

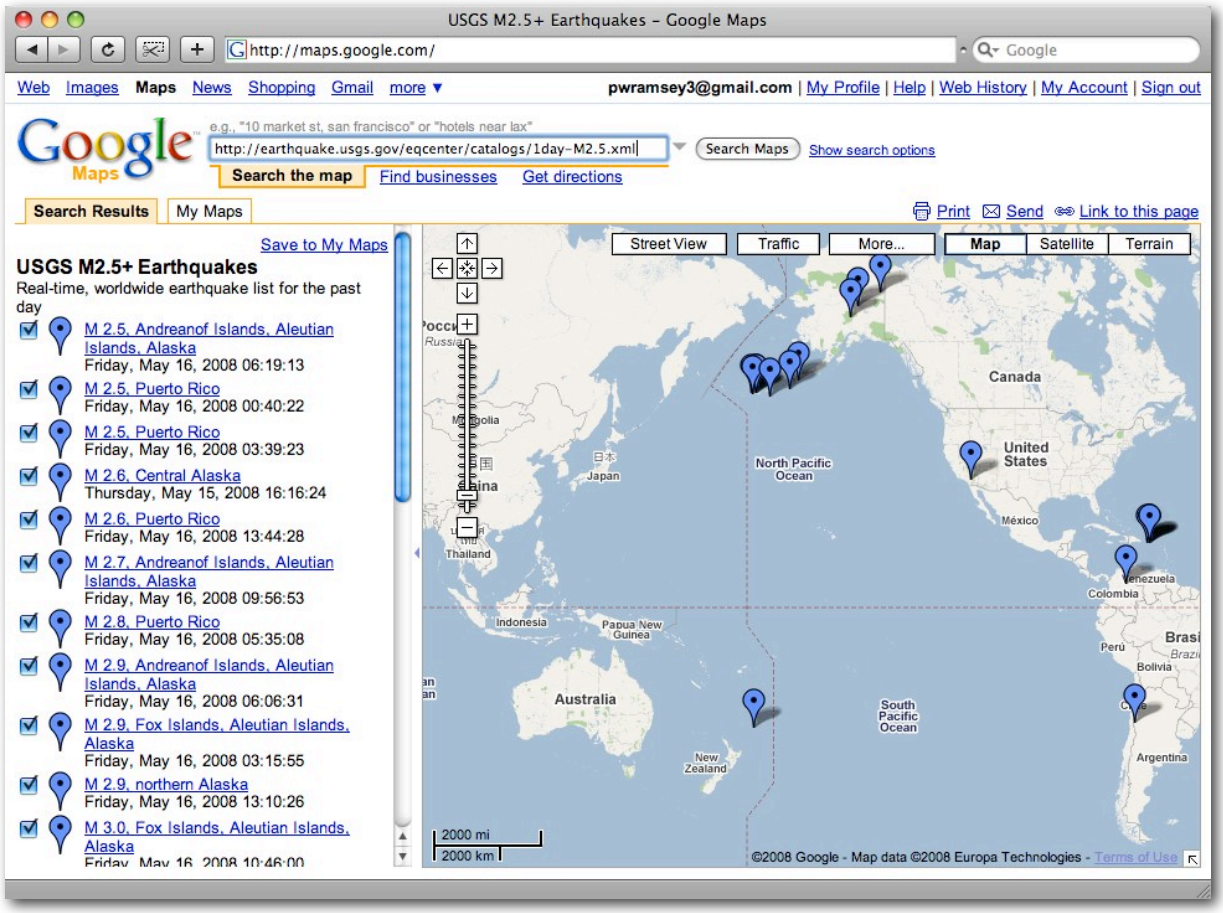
A standard web publishing page, but
look...
over on the left...
it's a bird, it's a plane, it's...
links to actual computer readable data! Feeds!

```
<?xml version="1.0"?>
<feed xml:base="http://earthquake.usgs.gov/" xmlns="http://www.w3.org/2005/Atom" xmlns:georss
="http://www.georss.org/georss">
  <updated>2008-05-16T15:18:02Z</updated>
  <title>USGS M2.5+ Earthquakes</title>
  <subtitle>Real-time, worldwide earthquake list for the past day</subtitle>
  <link rel="self" href="/eqcenter/catalogs/1day-M2.5.xml"/>
  <link href="http://earthquake.usgs.gov/eqcenter/"/>
  <author><name>U.S. Geological Survey</name></author>
  <id>http://earthquake.usgs.gov/</id>
  <icon>/favicon.ico</icon>
  <entry>
    <id>urn:earthquake-usgs-gov:ci:14369060</id>
    <title>M 3.0, Southern California</title>
    <updated>2008-05-16T15:01:12Z</updated>
    <link rel="alternate" type="text/html" href="/eqcenter/recenteqsww/Quakes/ci14369060.php"/>
    <link rel="related" type="application/cap+xml" href="/eqcenter/catalogs/cap/ci14369060" />
    <summary type="html"><![CDATA[<img src="http://earthquake.usgs.gov/images/globes/
35_-115.jpg" alt="34.000&#176;N 116.857&#176;W" align="left" hspace="20" /><p>Friday, May 16,
2008 15:01:12 UTC<br>Friday, May 16, 2008 08:01:12 AM at epicenter</p><p><strong>Depth</
strong>: 14.30 km (8.89 mi)</p>]]></summary>
    <georss:point>34.0003 -116.8571</georss:point>
    <georss:elev>-14300</georss:elev>
    <category label="Age" term="Past hour"/>
  </entry>
```

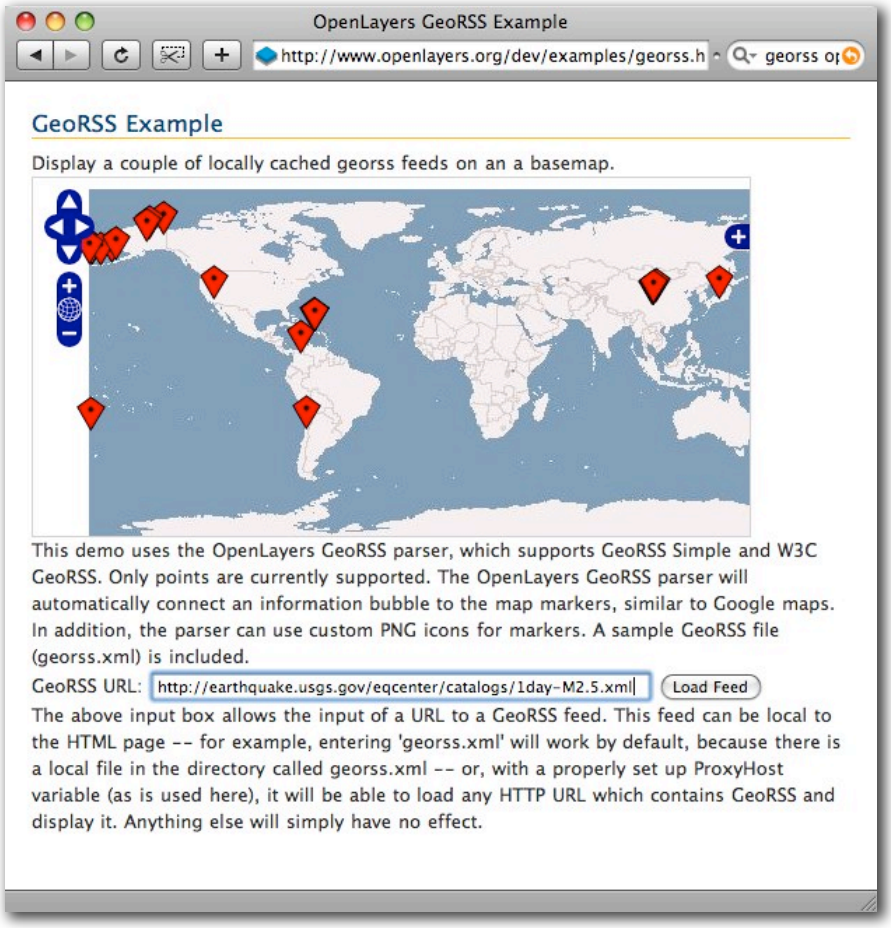
View the source behind those feeds,
it's not an easy read,
but it is for computers.

Lots of structure,
explicit tagging of links and entries and titles,
and even... location!

They speak the language of the internet
and the language of location, so....

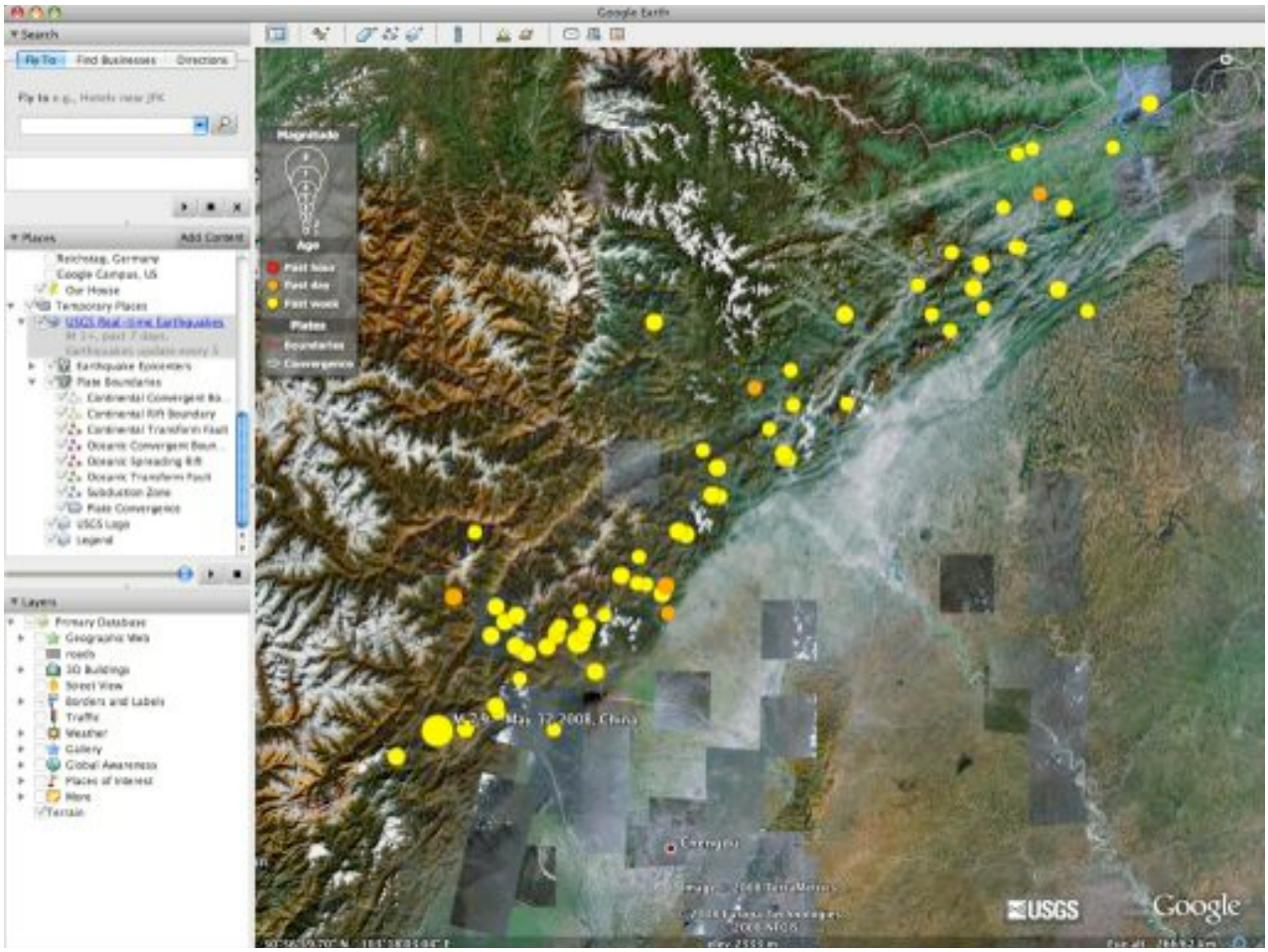


We can see their information in Google Maps....



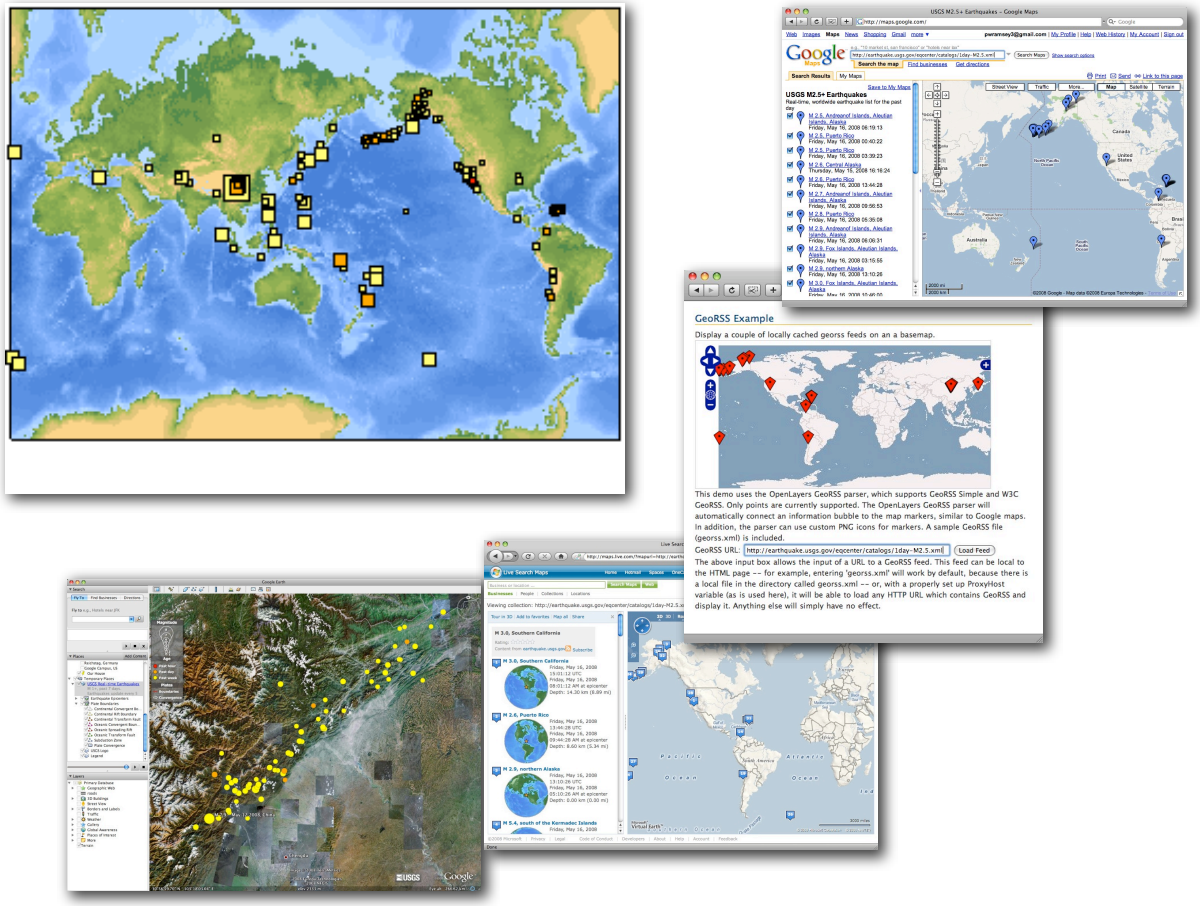
Or OpenLayers....

Or Virtual Earth....



They also publish the same data in a KML feed, so we can see it in Google Earth
and Virtual Earth
and OpenLayers
and Google Maps
and ArcExplorer
and ArcGIS
and Worldwind
and even convert it to a shape file with tools like FME or OGR2OGR.

```
ogr2ogr output.shp input.kml
```

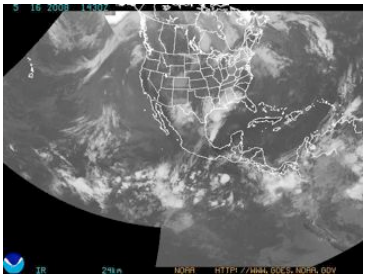


The USGS published this map on their web site.

And if that's where they stopped, they would simply be ON the internet.

But because they went a step further,
and published their ***data***,
we could also see it in all these ***other*** contexts.

The USGS is not alone in freeing their data for re-use.

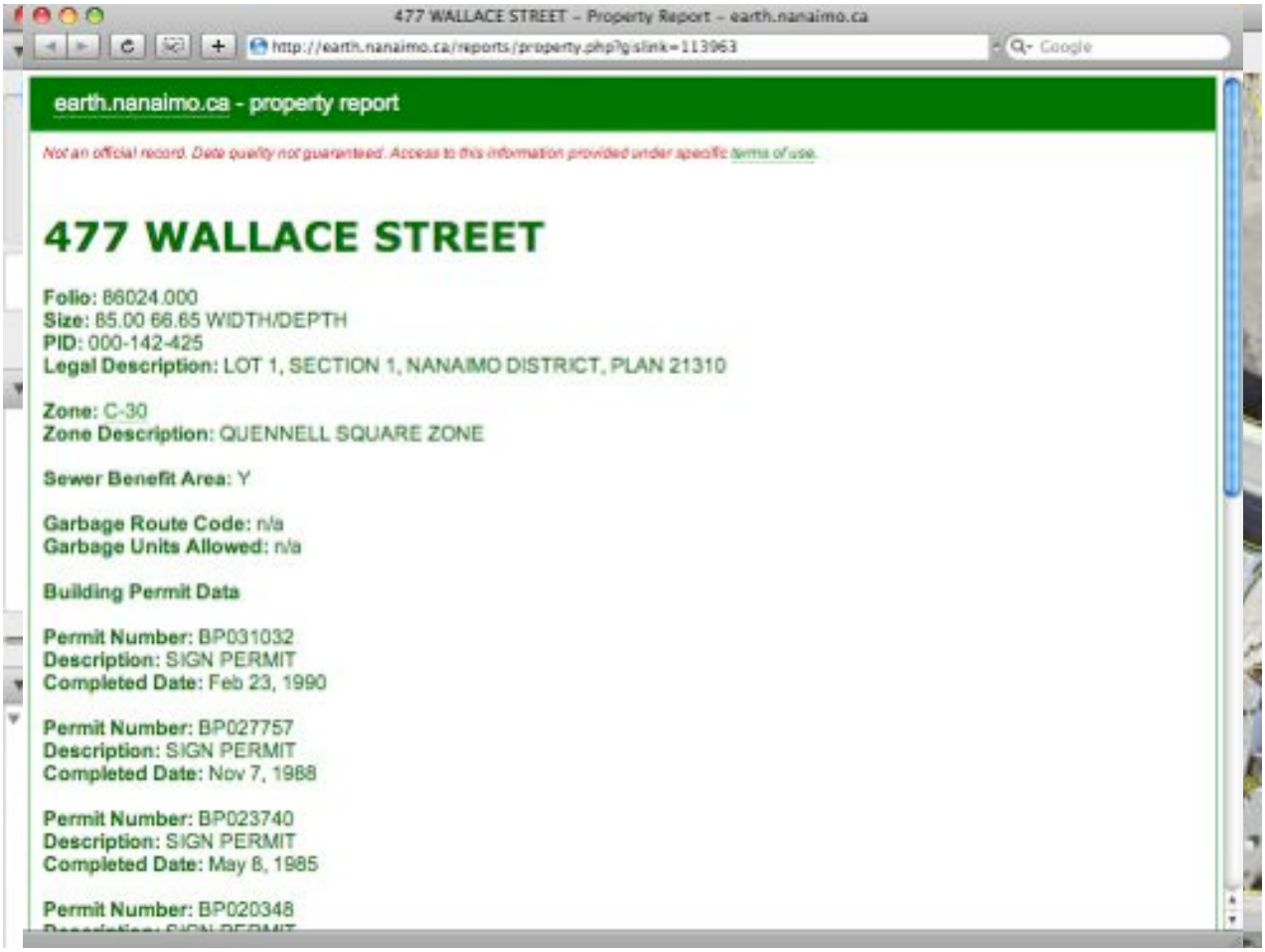


NOAA is publishing map services of weather radar.

NOAA is publishing weather readings from all its weather stations.

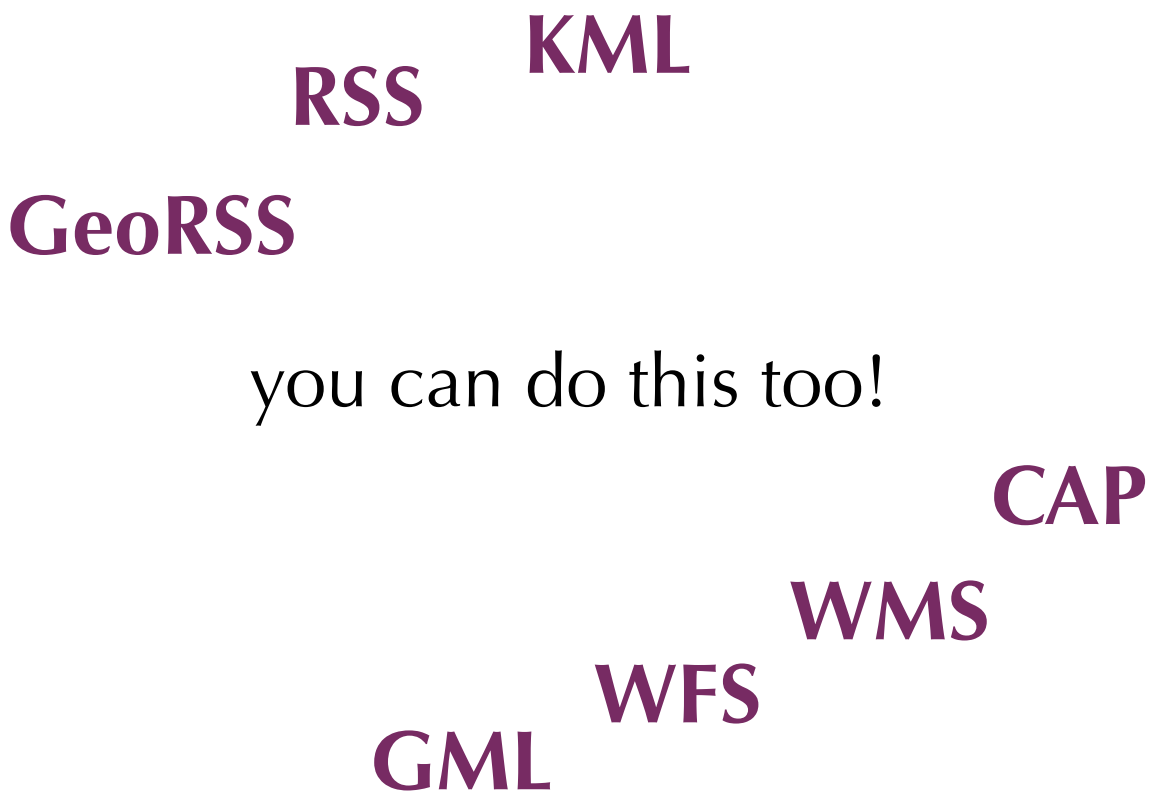
NASA is publishing map services of polar orbiting satellites in near real time.

TriMet has moved beyond the schedules
and is now publishing the real time location of its rail trams.



This isn't just the province of large national and regional agencies.

The City of Nanaimo is publishing information in RSS and KML,
like their parcel data in this example,
linked into their various other databases (property and building permit in this example)



What is the technology? Alphabet soup:

RSS, GeoRSS, KML, WMS, WFS, CAP

Do you **need** to use these standards?

No, but if you can fit your problem into one of them,
you will make it easier for people to consume.

Let's go back to my iPhone.

It was going to tell me when to take out the garbage,
and keep me from running over city maintenance people on my way to work.

How is that going to happen?

Well, two things could happen,
you decide which one is more practical
and likely to lead to success.

1. Design an iPhone portal
    1. Include routing
    2. Include scheduling and calendaring
2. Commission iPhone custom software to interact with the portal
3. Advertise the service to citizens

Design an iPhone portal
  Include routing
  Include scheduling and calendaring
Commission iPhone custom software to interact with the portal
Advertise the service to citizens

1. Place machine-readable garbage schedule online

2. Place machine-readable maintenance schedule online

3. Let **somebody else** figure out all the rest

Place machine-readable garbage schedule online
Place machine-readable maintenance schedule online
Let ***somebody else*** figure out all the rest

“why all the tech talk?”

So,
why am I talking about computers,
when I an supposed to be talking about public service?

This is the new millennium,
and public service,
the management of public information,
is now tightly bound to computers.

the Power of Information

the Power of the Desk

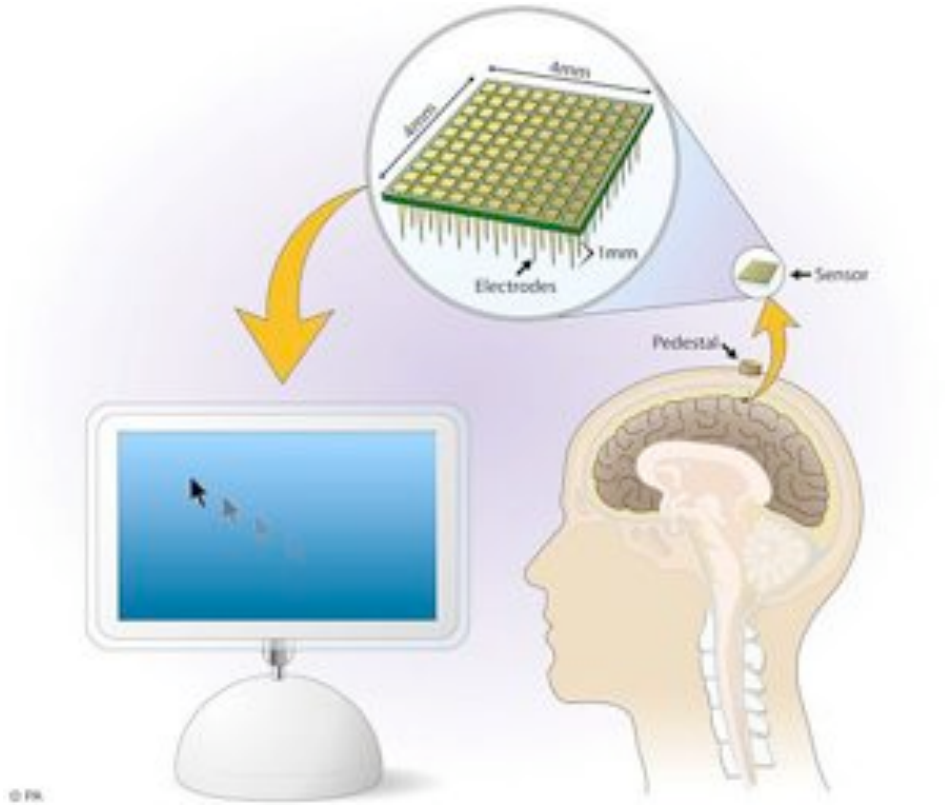
The UK report on the internet and public service was titled “The Power of Information”,
and “bureaucrat” means “the power of the desk”.

This is about **power**.

Information has power, and as public servants,
you control that power, you hold the power of information.
As public servants,
it is your job to ensure that the public can access that information,
to share that power, not to hoard it.

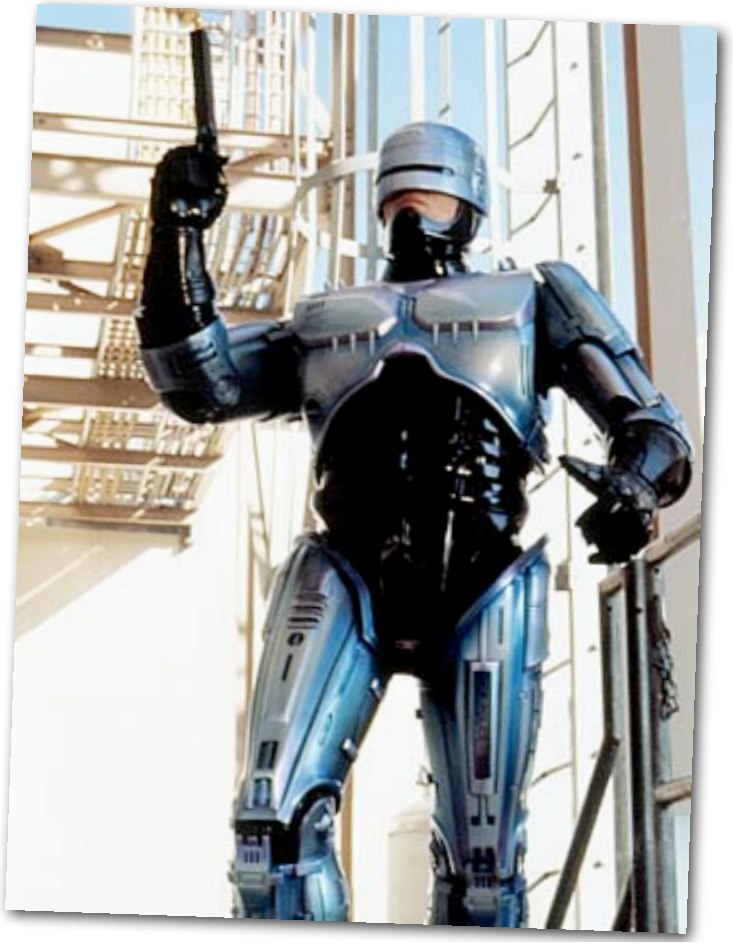
To do so effectively,
we have to master the new medium we are working in.

Computers hold our information,
computers will process our information,
we have to get closer to our computers
to understand how our information is going to flow.



We have to become one with our computers.

We have to become cyborgs.



We have to become Robocop.

He's a little menacing, isn't he?
The hand cannon, the titanium exoskeleton.

But really, he's very sweet at heart.

In fact, he's a natural public servant.

Bob Morton: What are your prime directives?

Robocop: Serve the public trust,
protect the innocent,
uphold the law.

Bob Morton:
What are your Prime Directives?

Robocop:
Serve the public trust,
protect the innocent,
uphold the law.

He’s really no different from this guy.

Except this guy doesn’t have the hand cannon or the titanium exoskeleton.

Robocop has another advantage though,
in that he’s already a cyborg.

And this guy is going to have to work at it...

He's going to have to work really, really hard.

We all are.

We're going to have to change the way we work.

public service
on the internet
is a new medium
it requires a new approach
serve online communities
serve alternative users of information
provide open access to your information
remove policy barriers
expect re-use, encourage it
use standard formats
become *part* of the internet

so to recap,

- public service is what we want to provide,
- and now we have to provide service on the internet
- but the internet is a new medium, it's not just a faster way of filling out forms, or publishing reports,
- it requires a new approach, that recognizes the strength of the internet, many-to-many communication and data exchange
- that means serving online communities directly
- that means serving alternative users of information, some you have never met, may never meet,
- do that that you have to provide open access to your information, removing technical barriers
- and you have to remove the policy barriers too
- you have to expect that people are going to re-use your data, in ways you don't expect, sometimes in ways that you don't approve of,
- you need to use standard formats, to work with the technical infrastructure of the geoweb
- you need to become **PART OF THE INTERNET**

thank you.