



What is Web 2.0? - Anything but a buzzword!

Explaining the reality of the 'new' Internet

The Internet has entered a new, more social, participatory phase; a second phase if you like—a new, improved Web version 2.0. This paper establishes that Web 2.0 is more than just a buzzword, but rather a revolution of technologies that in their construct are changing the way people interact with one another. This is the first part of a three part series that will be published over the next three months as part of our monthly article series. In the second part we will look at some of the technologies that are synonymous with Web 2.0 and in the third part we apply these to the travel industry to look at what is Travel 2.0.

Discussions about a new Internet, beyond just an information network, usually refer to a group or class of websites and

applications that exhibit certain properties centered around the socialness of the new web. Technologies (better yet services or user processes built on common technologies) such as blogs, video sharing, community sites, wikis, podcasting and RSS feeds create a more socially connected Web in which people can contribute to and edit the information infrastructure as much as they can consume. With a few clicks of the mouse a user can upload a video or photo from their digital camera and into their own media space, tag it with suitable keywords and make the content available to their friends or the world in general. Elsewhere, individuals are setting up and writing blogs and working together to create information through the use of wikis. This is the description of an Internet of user generated content; as opposed to information generated by the marketing department.

Web 2.0 takeaways

Web 2.0 is not just technology

It is both about culture and aesthetics

People are very passionate about it

Implementing Web 2.0 technology without the culture is a great way to mark yourself a clueless suit

Remixing and mashups are a big part of the whole Web 2.0 mystique

Most successful Web 2.0 endeavours are focussed on community in some way

The focus on community, or servicing the community, is part of the authenticity

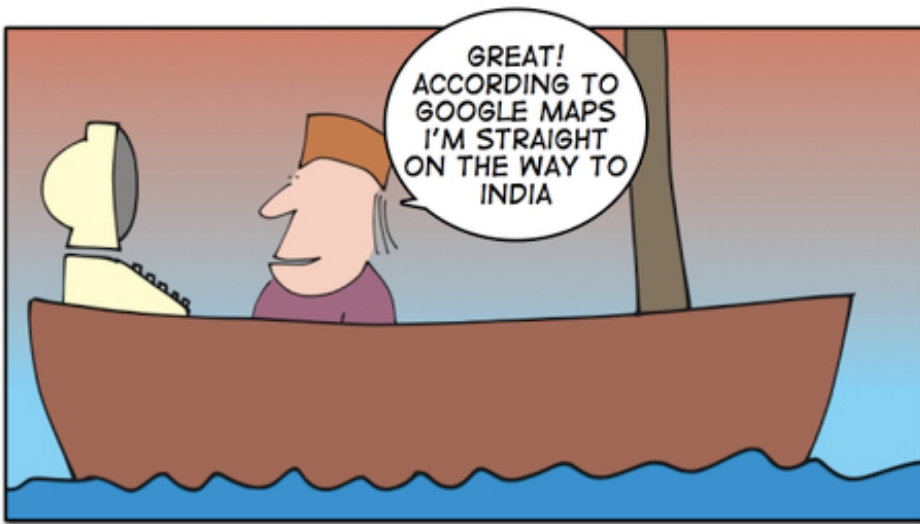
The fundamentals of

Web 2.0

Tim O'Reilly is credited with coining the term Web 2.0 in 1994 and in his seminal paper he lists and describes seven principles inherent with Web 2.0.

They are: The Web as platform; harnessing collective intelligence; data as the next 'Intel inside'; the end of the software release cycle; lightweight programming models; software above the level of single device; and rich user experiences.

In this paper we put these fundamentals into a broader perspective of What is Web 2.0



BACK IN THE AGES OF COLLIMBUS GOOGLE MAPS WAS NOT SO RELIABLE AS IT IS TODAY

SEEK AND POKE

People Centric Web 2.0

Rather than Web 2.0; perhaps this "evolution" of the Internet is better described as People or Human Race 2.0. In this participation age we are living in a culture of exposure where getting noticed is everything. The Internet is catalyzing a new social structure. Search engines, blogs, and viral marketing empower individuals at the expense of traditional institutions like governments, corporations, and media. Activities like search, downloading, streaming, consumer to consumer commerce (eBay), and blogging all exemplify the socialness of the new Internet. As this new social fabric is being borne out in front of our eyes traditional media are marginalised, trust in institutions wanes, and brand loyalty declines. Social currency is the new stored value. Social currency is the value your peers put on your self-actualization; including personal creativity, problem-solving, and independence from authority. The higher your social currency the greater your perceived value as an authority on a subject (whether it be your star rating on eBay or Trade Me, your number of Yahoo! Answer points, or your number of friends on My Space and Bebo).

Time magazine's 2006 Person of the Year was 'You'. Under the title of the award the cover featured a picture of a PC with a mirror in place of the screen, reflecting not only the face of the reader, but also the general feeling that 2006 was the year of the Web - a new, improved, 'second version', user generated Web.

Web 2.0 is not an obscure geek buzzword. In fact, like the Time Magazine feature the media spotlight is intense - bought on by the profound challenges a social Internet poses for traditional media.

The widespread adoption of digital cameras, videos, and mobile phones, have all contributed to a rise in citizen journalism and witness contributions appearing as part of news reporting. Newspapers and TV are being forced to review how content is generated and how to facilitate public input. For example, In the UK The Sun newspaper now provides a single mobile phone number for the public to submit copy and photos, and in South Korea the OhmyNews service has over 50 journalists editing content regularly received from 40,000 citizen journalists. A fundamental shift in people's perception of who has the authority to 'say' and 'know' underpins the Web 2.0 ethos.

The Wisdom of Crowds

The book *The Wisdom of Crowds* by James Surowiecki has been very influential on Web 2.0 thinking. Surowiecki predicates that a problem can be solved more effectively by many operating within frameworks, than even the most intelligent individual few of that group. Tim O'Reilly, the man accredited with coining the phrase Web 2.0, explains the logic highlighting a product called Cloudmark, in which users identify spam emails thereby manually building up a collaborative spam filtering system that is outperforming systems that rely on analysis of the messages themselves.

One of the many elements of Web 2.0 is the service called tagging, a service linked explicitly to the concept of the Wisdom of Crowds. A tag is a keyword that is attached online to a website, image or video clip to describe it. There is no formal

The offline impact of Web 2.0

Media/magazines, newspapers and encyclopedias

The rise of consumer journalism, everyone as a contributor in blogs and wikis

Recruiting and dating companies

Impacted by the many social network services

Real estate, brokers, recruiters and classified ads

Impacted by consumer to consumer sites such as eBay and Trade Me

Advertising and direct mail

Versus cost per click and Google AdSense



Wikipedia

The exponential growth of Wikipedia in the last 24 months, one of the leading lights for Web 2.0ists, relative to the likes of Encarta and Britannica is staggering. Wikipedia is shaped by the wisdom of its users whom are completely free to contribute to and edit entries. Wikipedia illustrates that with critical mass the crowds also become self regulating.

Web 1.0

versus

Web 2.0

Features

MODE:
PRIMARY UNIT OF CONTENT:
STATE:
VIEWED THROUGH:
ARCHITECTURE:
CONTENT CREATED BY:
DOMAIN OF:

Comparison

Read versus write and contribute
Page versus post/record
Static versus dynamic
Netscape and Microsoft versus Mozilla, Safari, RSS readers, anything
Client server versus web servers
Programmers versus everyone
Geeks versus mass amateurisation

structure to the tagging process which was bought into the mainstream by the popular 'social bookmarking' site del.icio.us., which allows users to link their own keywords to web pages when they bookmark the site - and then search for web pages via this organic web of words.

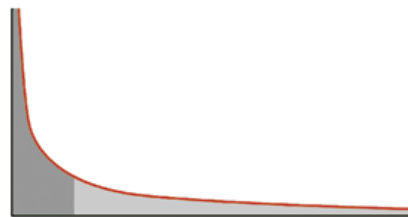
Social bookmarking systems allow users to create lists of 'bookmarks' or 'favourites', to which they tag keywords, accessible by all users of the system. At its core is the recognition that the collective intelligence of the masses is captured for all to use, so classifications and therefore searches become richer, clearer and more satisfying - all music to the ears of an advertising environment. The process is often referred to as creating a folksonomy (as opposed to a taxonomy created by one). Trusting users to find uses for data or other web items via tagging or programmatic interfaces is a major characteristic of a Web 2.0 website.

There are two key concepts which have a bearing on What is Web 2.0. The first is the concept of a 'network effect' and the second the importance of data. For its application to the business world a recognition of the enormity of over a billion users of the Internet as a network and as such the mass marketing opportunities can not be underestimated. Clearly, the development of social online communities such as the world's largest website, My Space, demonstrate how critical mass can become self-perpetuating. Moreover, given the deep levels of content integration that occurs on the Internet through hyper-links the network effect is perpetuated in the Web 2.0 era of highly interlinked blogs and data aggregation.

The Long Tail

However, there is an alternative argument that typifies the emotional and non-

conformist view of Web 2.0ists that is referred to as the Long Tail Phenomenon. The Long Tail is the title of a book by Wired Editor, Chris Anderson. In it, Anderson provides an example from music sales to demonstrate how chart-listed albums receiving radio air-play dominate in their frequency of album sales. On a graph, as we traverse towards the right of the graph album sales drop off dramatically, roughly according to the power law curve (the best way to conceptualise is terms of the 80/20 rule where 20% of a population hold weight over the 80% - used often in the example of wealth). The curve continues falling away to the right following the rule, but, and this is the crucial point outlined by Anderson, only if there is no artificial barrier (such as what is in stock or promotion of other albums) to people buying less popular albums.



However the web eliminates potential artificial barriers and thus accentuates the extent of the long tail - on the web even the most unpopular music, obscure books etc., can make sales. From a business perspective, recognising that with the enormity of the Internet even a niche market can provide exponential economic returns. Amazon Books is case in point, while according to Anderson 63% of sales offline are new albums while on the Net they account for only 36%; and the long tail of search is the targeted market for the online advertising giants like Google Adwords and Overture.

The Importance of Data

The size of the Internet means ever-increasing amounts of data; and subsequently a recognition of its importance. Some commentators fear that this datafication is causing us to drown - an endless stream of information bombarding our senses all day. Yet at the other end of the scale our time resource is whittled away - increased work demand, increased leisure demand; and overall increased demand to consume time. We are looking to technologies to simultaneously save us time and fuel us with more information. The staggering scale of data is emphasised when we consider that Google measures data in petabyte (a million billion bytes)!

The new Internet focus is on the presentation of data; it is the user experience which defines the success of a website in the Web 2.0 era. Web Design has evolved to 'user experience design' led by the evolution of Rich Internet Applications (RIAs). Referred to the web as a platform (as opposed to an application that runs exclusively on your own computer) emphasis is less on the software and more on the service it provides. The delivery of Web 2.0 RIAs utilises a technology called Ajax. Ajax overcomes one of the biggest frustrations of HTML - time spent waiting for pages to reload and refresh between page views - by passing only small amounts of information to and from the server once the page has first been loaded. This allows a portion of a web page to be dynamically reloaded in real-time and creates the impression of richer, more 'natural' applications with the kind of responsiveness that is commonly found in desktop applications. Ajax interfaces tend to be glossy, fast and have a physical quality to them. Leading websites are integrating easy to use RIA tools for comparing products whether it be hotels, flights, property or kitchen appliances; the

Social networking sites

such as My Space, Facebook and Bebo have struck a powerful social chord. But looking back to the Geocities home page circa 1996 we find the statement: "We have more than 200,000 individuals sharing their thoughts and passions with the world, and creating the most diverse and unique content on the Web". Replace 200,000 with 100 million and this could be My Space today. Today's Web 2.0 paradigm has shifted away from a relative set of terminology such as cities, neighbourhoods and home pages in the Geocities construct to a more direct access to the individual and their whole social kaleidoscope of today's Web 2.0 communities.



use of rollovers integrate a greater amount of deep information, and exceptional search functionality. The value of a Web 2.0 website is determined in how the data is used; truly innovative interfaces are a valuable asset. For example Amazon, sent shivers through the retail industry by patenting its user review technology. Amazon also records your book purchases and combines this with millions of other buyers to develop their recommendations engine. These types of websites (long tail aggregators as Anderson calls them for their leverage of the masses) are using data to learn and become better the more they are used.

A further element in the importance of data is the sharing of data. In the 'new' internet the social underpinning goes beyond just open source software sharing of the programming code to data being also openly shared for use in many different ways. Known as mash-ups, a term coined by DJ's referring to the sampling of different songs to remix a new tune, web developers are taking data from many sources to

create new websites with highly desirable results. An early leading example is Paul Rademacher's HousingMaps.com which combines Google Maps with the USA-based Craigslist of flats available for rent.

The new Internet is a confluence of social and technological movements that are shifting the balance of power from marketing spiel to the consumer themselves. User generated content and communication is fundamentally changing the rules of business. Technology and social changes are creating a potent mix of forces that will transform the way all businesses – not just media firms – operate, create products, and relate to customers. At its heart is a value shift from ownership to experience.

an Internet of pure brochure ware. In this regard is Web 2.0 simply the realisation of the promises of Web 1.0 now that we finally have bandwidth, technology, devices and infrastructure? Is the technology leading the social change or are social currency and reputation fundamental human traits and the "new" Internet simply facilitating it? Perhaps it was simply a case of the Human Race being only at Version 1.

Xebidy Strategic Design

XSD provides leading edge e-commerce strategy, design and implementation for New Zealand and Australia travel companies. Leading edge is Web 2.0 applications and strategies, and development of Rich Internet Applications (RIAs) for booking processes, mapping, travel planners and shopping carts. XSD products include: competitor analysis, derivation of strategy canvas, "space" identification; design and specification of functionality; return on investment modeling; web design and development; ongoing support, maintenance and mentoring; and search engine optimisation and Internet marketing strategies - design and implementation.

Dan Roberts
Strategic Designer
Phone: +64 21 360 486

Email: stuff@xebidy.com

The Same Internet?

Finally, before tackling some of the Web 2.0 technologies in our next article let's hark back to an earlier suggestion that perhaps Web 2.0 is People 2.0. The story says that the founder of the Internet, Sir Tim Berners-Lee, vision was very much of a collaborative workspace where content was for both reading and editing. The first development by Berners-Lee was the project management tool, Enquire, which allowed documents to be linked together and edited. This evolved to the World Wide Web and a browser that could view and edit pages of marked-up information (HTML). However, during the go-live from the original development computers the ability to edit through the browser was omitted to speed up the uptake by users. Subsequently the first commercial browsers ViolaWWW and Mosaic (which became Netscape) continued the omission, creating

