

Doing business by selling free services

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Abstract With the advent of the web 2.0 trend, there have appeared a great variety of services that are offered as free. Although the appearance of free services is not new, we consider that the popularity of these services in the Web 2.0 world is a relevant fact that has to be analyzed from an economic point of view. In this chapter we will give an overview of some of the business models that are present behind those services, like freemium, advertising, work exchange and mass collaboration. We will also present a case study, called EuroAlert, which contains a combination of the above models.

1 Introduction

Although it is not easy to provide a precise definition of Web 2.0, it is clear that there is a trend of web applications which are different from traditional web portals. Web 2.0 is more commonly characterized by a set of features that are shared by some web applications. The eight core patterns which have been characterized in [Musser, 07] can be summarized as:

- *Harnessing collective intelligence*, where the network effects of the architecture of participation produce software that gets better when more people uses it.
- *Importance of Data*, which means that the main value of these applications is the data sources that are managed in a unique, hard-to-recreate way.
- *Innovation in assembly*, the use of data and services which can be remixed by means of APIs, enabling the appearance of applications that create new opportunities and markets.
- *Rich user experiences*, that go beyond the traditional web-page metaphor obtaining rich user experiences combining desktop and online software.

- *Software above the Level of a Single Device*, means that some of these applications offer new experiences using Internet-connected devices
- *Perpetual beta*, which means that these applications break the old models of software development and adoption in favour of online, continuously updated software as a service models.
- *Leveraging the long tail*. Following [Anderson 06], most of these applications capture niche markets profitably through the low costs of production, distribution and access enabled by the Internet.
- *Lightweight models and cost-effective scalability*. The availability of lightweight software development models makes it easier to create new software products where the main singularity is marked by the quality of the innovation.

Apart of those core patterns, it is noticeable that under the Web 2.0 umbrella, some web applications have been very successful making money by offering services that are apparently free to end users. In this paper, we review these business models and offer a case study called EuroAlert which can be seen as a typical Web 2.0 business that follows a mixture of those models.

2 Web 2.0 Business Models: Leveraging the power of Free services

One of the most amazing things of this “web 2.0 era” is the appearance that every service you consume is for free. Once you enter the web you start using really complex-to-develop and high-maintenance applications and the subscription fees never show up in your credit card. Think for a moment in the bandwidth cost involved in running video sharing services like YouTube or the hosting bill that Wikipedia must be paying to provide the service for free for the millions of users that consume (or create) the articles daily. They do not even display ads with the content.

Of course you are paying a flat rate data plan to your network provider every month, but that seems to be everything. You may argue that there must be some kind of money flow you are not aware of but fortunately one of the foundation principles of the internet is network neutrality so there is not cost transfer between carriers and application providers (at least for the moment).

Main business models can be described as the exchange of money for services or products from the customer to the service provider or product retailer. That is the way a supermarket or a buffet of lawyers work and make their money. Of course there are promotions, trial periods, price shifting models and other well-known practices in which businesses make money by giving away some things expecting you will buy others. But you will find very difficult to name a single company that

provides you a service for free, and forever. There is not much sense in giving away things in traditional economies.

The internet, and most precisely the web, is changing some of the most important rules in traditional economics and some companies have proven very profitable by selling their services at zero. As this statement has not apparently much sense we will try to describe what are the four most important ways of giving away really valuable services for free and still make money, in some cases lots of it.

Advertising: ¿like in Web 1.0 and the analog world?

In very few words, this well known business model is based on the building of an audience, or better to say in internet terms, a community, to which advertisers will want to offer their products or services. A company gets the attention and, even better, the participation of users by giving away high quality services in the form of tools, contents, applications or whatever you manage to prove useful for them. So it's not a two way exchange (between customer and provider), there is a third party (advertiser) who pays to participate in the exchange of free services.

You can argue that there is nothing new to the television or radio stations business model. When in the mid 90's the web started to be a place where everybody wanted to do business, although very few succeeded, advertising was the main tool companies tried to make money with. But as everybody knows the 2000 bubble burst proved this new economy model was a failure and most companies went bankrupt. Some of them had gone public recently, others were well established old economy corporations who made risky bets on the new internet promises, and other were small start-ups trying to rise some venture capital looking for a chance to go public. What all of them had in common was that they did not understand the power of the web and their approach was to import the practices and models of the mainstream media. Obviously it did not work for most of them and for a few years it seemed there was not a clear way to make money in this "new media" they considered the web was.

But as Google and others have taught us by their extremely successful figures and stunning growth rates, it was just a matter of finding how to, not that advertising was not made for the web. Although Google did not invent the concept of text-ads and cost-per-click, they must take the credit for making it succeed (Adwords) and then build the biggest Ad-Network (Adsense) in the Internet. They proved the model was right and Google became a major player in the internet, and in the toughest time, by giving away great applications and services at no cost for users, but running ads on them.

By now lots of companies are creating and experimenting with innovative ways to make money around publicity, like pay-per-post, pay-per-action or pay-per-connection among others. The rise of social networks, video sharing applications and other new services require new approaches that are now being imagined to attract and make valuable the growing expend of advertisers in the online world. We do not intend to discuss in depth contextual advertising or pay-per-

click as concepts, but we think it is important to notice that the building of this ad-networks have lowered the barriers for both advertisers and publishers in such a way that a much bigger market has been created.

Lots of free internet services are now making their money by selling the participation of advertisers in their communities, as other tried in the 90s and failed. What is really new and makes the difference in this web 2.0 scenery is that every small local business can buy ads at a very small prize. And that every individual can monetize his small niche blog by selling ad space and it will make good money if his content is valuable.

Freemium: Premium users pay your bill

This business model is built around the existence of two types of users, a large base that consume the service for free and a small percentage who pay a subscription for the most advanced features of the service. In other words, the margin the companies get from the premium users pays the bill for the ones who consume the service for free. Of course this is a rough simplification of complex sceneries where you can find lots of combinations of multiple tiers of subscriptions with different levels of access to contents or services.

There are lots of examples like the LinkedIn social network, photo sharing services like Picassa or Flickr, or the famous and nearly impossible to replicate Craigslist classifieds. It is important to say that this business model is not equivalent to those models, mainly in the software industry, where you are granted with a trial period where you can evaluate the features and then you are required to pay a license if you want to continue using it. In the Freemium scheme, free users can get the service for free and forever, and the quality of service is good enough for most of the users that will never consider paying for the advanced service because they do not need it. Companies are also comfortable because the small percentage of users that will convert into premium, and pay the few dollars a year the average subscription is worth, is enough for a profitable business model.

This is one of the most common business models in the Web 2.0 world and one of those which also failed in the pre-bubble burst so we must take a closer look. There has not been a significant change in the way the model is being implemented in the Web 2.0 wave. There are not innovative approaches like in the advertising model we discussed previously, which make a difference. But there have been very significant changes in technology and society that have contributed to the success of a new generation of services that are doing good business in the web.

First of all we have the low price of average subscriptions that usually are in the range of a few dollars a year (20 to 100). This is mainly due to the drop of the costs involved in running the services, which now are much lower than a decade ago. Bandwidth, storage and processing are progressively becoming a cheaper raw material for digital services. So costs per user are really low when we go to the scale of thousands or millions of users, and thus to the subscription fees that can be charged.

The other significant change is that now there are thousands or millions of potential users for lots of internet services or applications. Most business plans in the 90s were not realistic in the reach they expected to achieve just because there was not a broad enough user base for them. Since then, a new generation that grew up with a laptop connected to the internet during high school and college is now in the market and they are consumers with the skills to use these web 2.0 services and, as digital natives, their lifestyle demands and needs them.

Work exchange: Free services in exchange of some work

In this business model, when you are using the service you are creating value for the company who provides it for free. Sometimes, it is a conscious act like when you vote in a news aggregator and you contribute with your knowledge, your experience or your opinion. Other times, it is the sole action in which you use it what is valuable enough not to charge you for the service. It is like you are doing some work for the company in exchange for the free use of the service.

There are especially curious examples like the Google-411 service, which is free with no limits. Directory assistance services are usually very expensive and companies charge high minute fees for each inquiry you do. Google is providing it at no cost and apparently they are not using their profitable advertising business model to subsidize it. The reason beyond is that the real value for them is the act in which each user is adding to their database unique ways of pronouncing and requiring information about businesses, addresses, etc. This information is really important for them, in order to improve their voice recognition technologies. They are compensating the users by providing a free directory assistance service because otherwise it would be very difficult to compile that data. Of course the model works when the companies obtain higher value in this way than charging the users for the service.

Slightly different, but in the same category we can discuss user generated content services like news aggregators. If you think in the model of services like the popular Digg, the community gets for free the most interesting stories without browsing thousands of online media sites in exchange for voting and sharing their preferred stories. If nobody takes the work of sending stories and voting those proposed by other members, the service would not exist. The “work” of each user is creating value for the service and the owner of the platform monetizes by selling ad space, sponsorships or any other way the community tacitly agrees. The final user benefits being better informed than reading a single source. For most people it is a fair exchange but the main question involved in this type of platforms for participation that are run by some one else who is profiting is if the revenue should be split to compensate the creators of the best contents. Some platforms provide affiliate programs to stimulate and incentive the participation of the community of users.

Mass Collaboration: Free because costs are nearly nothing

Around Web 2.0 platforms arises communities of users that agree in creating something (generally contents or software) by giving away their work with the condition that the service will remain free to everybody. In these categories we can include amazing results of mass collaboration like the Wikipedia and hundreds of open source projects of different size and quality, some of them outperforming in features and reliability its commercial equivalents.

Wikipedia is surely the best and biggest example to describe this model in which apparently there is no money involved. Everything related to mass collaboration started around software sharing and peer production practices, although the scale of people involved have reached new horizons with the Wikipedia project.

Software coders were the pioneers in leveraging the power of the new communication improvements that came with the spread of the internet to collaborate in creating better programs. Most of today's well-known open source software projects were started even before the Web 1.0 time, some even before the internet became commercial. And the new tools in the Web 1.0 time helped spreading ideas about peer production and pushed the foundation of dozens of communities around the idea of creating new and free software.

During this Web 2.0 wave most of the practices used and improved by developers to run their projects were transferred to other ways of creating things, from an encyclopaedia to a journal, written by volunteers. Of course, most of the tools used in these projects are open source, thus maintained for free. So we find people creating value for free in the web 2.0 with the tools that others agreed to create also for free.

When some people argue that this kind of behaviour sounds as unfair competition they should think in the broad and great innovation consequences of the sharing of software, knowledge or just data. In the case of Wikipedia the major cost of production would be the work of volunteers, sometimes really qualified ones, which do it for free. Hosting costs and the minimum staff of Wikimedia Foundation is supported with donations raised in a few campaigns a year. The value the users obtain by the existence of this incredible resource is impossible to measure, but surely this “gift economy” [Anderson 2008] is generating a huge amount in varied forms.

Although Open Source business models fit into this category the discussion would need a whole chapter. Open Source software is usually free of charge, there is not a license cost attached, but lots of companies like Red Hat, have founded successful businesses by charging users for support, deployment or customization services.

Subsidizing at a global scale

As you see there is no magic in the web, not even in the Web 2.0 and all is about cross-subsides, but not between products like in traditional economies. It is not that you are buying any other product when you enjoy your email service for free. Somebody else is subsidizing the “no cost” for you, not your other acquisitions like when you get a 3x2 promotion at the supermarket. As a summary this table tries to simplify the scheme in which this four business models work:

Model	Cost	Who pays	Why
Freemium	0	Premium users	Better features
Advertising	0	Advertisers	Attention of community to its products or services.
Work exchange	0	Service provider or sponsor	Getting value from users
Mass Collaboration	0	Donators Volunteers	Altruism Self-promotion Interest

We have not talked yet about the most obvious and controversial Web 2.0 business model, the one that involves the music and film industry. This is because we are not seeing a clear new business model there. Surely, entertainment industry is being deeply affected by changes in production and distribution costs driven by technology advances. We think zero-marginal cost consequences is not a business model itself as Chris Anderson documents in his taxonomy, but a factor that influences heavily the way the price has to be determined. As is well known in economy, price is usually more influenced by consumer psychology than by costs of production. When something can be copied and distributed at virtually no cost, what is the right prize? 1\$ per DRMed song or free like RadioHead did recently? Anyway this discussion could last an entire book and it is not the purpose of this chapter.

Models around free software should be studied apart, although the distribution costs are affected the same way as in the music industry, the cost of production is very different and there are also evolution and maintenance costs involved.

3 A case study: EuroAlert.net

We will use Euroalert.net as an instrumental case study [Stake, 1994] in order to provide insight into the issues described in theory about Web 2.0 business models. While the main concepts of the four business models selected have been discussed with a few examples of very famous “pure” web 2.0 services or companies like Wikipedia, Flickr or Youtube, in this section we will provide a smaller service.

We have two main reasons why we have chosen Euroalert.net to develop this case study. First of all it is representative for three of the four business models described in theory and it is planning to launch features based on the fourth. Secondly, it is owned by a very small sized company, which is one of the trends of Web 2.0 where small innovators have an opportunity to compete with the big guys.

The screenshot shows the Euroalert.net website interface. At the top, there is a navigation menu with categories: **Hot Topics!**, **News**, **EU programmes**, **Calls for Proposals**, **Calls for Tenders**, **Widgets**, and **Blog**. Below this, there are sub-categories: **Research & Innovation**, **Information Society**, **Education & Training**, and **What's hot on...**. The page is dated **Monday, June 02, 2008**. There are links for **Ads by Google**, **EU Governance**, **EU Countries**, **Turkey EU**, and **EU Laws**. The main content area is titled **Current news from the European Union** and features two news items:

- Stakeholders discuss how to put the European Qualifications Framework (EQF) into practice**, published on **Monday, June 02, 2008** under **Social Affairs**. It includes links for **+ info**, **Send**, **More news**, and **Edit**.
- European network set to boost women in power**, published on **Monday, June 02, 2008** under **Social Affairs**. It also includes links for **+ info**, **Send**, **More news**, and **Edit**.

Below the news items is a section for **European Union Calls for Proposals**, featuring a call for proposals: **Call for proposals – EACEA/17/08 under the Lifelong Learning programme Lifelong learning strategies - LEARNING**, published in **OJ C 132, 30.05.2008, p. 35** under **Education & Training**, with a **next deadline Wednesday, August 13, 2008**. The text below reads: **The European Union has published a new Calls for Proposals with the aim of**.

The right sidebar contains **Euroalert.net Sponsors** (WEST-MOS, NODALIA, gateway) and a **Euroalert.net in your web** section with a **Register at condelway** link to get **free EU News widget** and **free EU Calls for**.

Free information and contents about the European Union

Euroalert.net (ISSN 1988-3382) is an internet property of Gateway S.C.S. S.L. that has been providing specialised contents and information about the European Union for nearly ten years. During this period, the business model which has been used by the company who owns the service to monetize has varied notably. As a result of years of experience Euroalert.net holds more knowledge and provides more sophisticated services in this Web 2.0 era than ever before and tries to leverage the “power of free” in various forms to make a profitable business model.

The main contents offered for free in Spanish and in English to users from all around the world are daily news about European Union affairs, the compilation of all initiatives and calls for proposals to get funds for projects, and the calls for tenders and commercial opportunities published in the Official Journal.

Additionally Euroalert.net provides EuroalertSearch, a specialised search engine about EU related resources in the Internet, and a weekly newsletter with a summary of the most important information published during the week. All of the above are for free.

Publishing reliable information daily in two languages is a really big effort for a small company, so there is no sense in giving it away for free for its thousands of users if it could not be monetized somehow.

From printed magazine to free digital web 2.0 services

At the end of the 90s, while the internet in Spain was walking from the academic environments to the commercial world, Euroalert was a fortnightly paper magazine. It was edited by a small company that carefully printed, folded and delivered to subscribers by ordinary mail. It was some kind of craftsmanship. That was the first business model applied, direct sell to subscribers. Of course, its print run was very small and it was geographically concentrated.

When internet gained users, the subscribers demanded immediate information and Euroalert turned into a digital publication where users did not have to wait for the two-week editorial cycle. They could log in and benefit from daily updates, just as any typical Web 1.0 information portal. That was a big step and a significant cut in costs and thus in subscription fees. The number of users also increased significantly and the evolution of the business model proved successful in the new digital world.

In 2007 Euroalert.net indexed into major search engines its ten year archive, launched an international version updated daily in English and became a free service for everybody. That was a big bet for a small company that resigned the subscription incomes and started to give away one of its most valuable assets, its carefully compiled archive of European Union information. Of course there was a reason behind this apparently strange move so we will now describe the four web 2.0 models applied to monetize the service in the next few pages.

In exchange of some work

First Euroalert.net opened an API with some tools and small applications, widgets in Web 2.0 language, than can be easily installed in other web sites or blogs to communicate with Euroalert services. The Euroalert.net community, carefully built during last ten years, embraced the new vision with curiosity and installed the widgets, mashing up with their own sites. When a website or blog installs a Euroalert.net widget, it improves the service provided to their users by offering specialised and better updated contents or complex services like euroalertSearch.

In exchange of giving away the contents, coding and updating the API and the widgets, and providing support, Euroalert.net obtains two valuable things from the work of the users. First the spread of the brand as the Euroalert logo is attached to many more sites related to the community of users interested in European Union affairs, who are in fact the main clients of the subscription services. The second and more valuable thing is the learning that the Euroalert.net team gets from the use of the free service. The questions and issues received by the support team and the feedback for the marketing team when they communicate the free service is a very valuable asset to improve the commercial version of the widget, for which euroalert.net charges a fee. Another advantage is, of course, that a percentage of the users become subscribers when their needs grow.

Freemium

The commercial version of the widget that displays automatically European Union information in other websites and blogs by communicating to the API provides extended features, and subscribers are charged with a small monthly fee. In this version, called Euroalert One Web Full Content, there is no branding and the subscriber displays the complete content inside his website. This way Euroalert is transparent to the final user and the subscriber takes credit of the valuable information displayed as all the links are internal to the widget. The Freemium approach is the major source of revenue for Euroalert.net and the way the free services are possible, thanks to the users that pay the subscription.

The scale lets subscribers being more competitive buying the licenses for displaying the contents than creating and updating them by themselves. As an example, in the case of calls for tenders and commercial opportunities at European Union, Euroalert provides daily updates of this information that are highly valuable for lots of companies. At least one person in the average subscriber company, before using Euroalert services, daily browsed the official journals in order to extract the opportunities relevant to their organisations and then sent them internally to the people who must decide if it is worth to apply. The process is quite inefficient as many people and several forwarded emails are involved so the value proposition of Euroalert One Web Full Content is welcomed once it is showed to organisations.

And as a matter of scale the price of subscriptions is very low so companies automatically become more competitive by installing in their intranets, filtering the information and targeting to the specific persons who must make the deci-

sions. Additionally the final person can see the information at the moment they go into the office and not several hours or days after, and the organization save the resources they were expending in browsing and filtering the information. Other times the client is an association that provides the same service for its affiliates as they are not big enough to get the service individually.

The screenshot shows the Euroalert.net website in a Mozilla Firefox browser. The page title is "Euroalert.net - Tools, widgets and other free information services about the European Union". The browser address bar shows "http://euroalert.net/en/widgets.aspx". The website features a navigation menu with categories like "Hot Topics!", "News", "EU programmes", "Calls for Proposals", "Calls for Tenders", "Widgets", and "Blog". A search bar with "euroalertSearch" is visible. The main content area is titled "Widgets and tools for the Euroalert.net community" and includes a section for "Free current news from the EU on your website". This section lists three steps: 1. Register with the Condelway platform, 2. Use the Euroalert.net API key to customize JavaScript code, and 3. Copy the code to the website(s). A sidebar on the right promotes "Euroalert.net in your web" with a registration link and a "Sponsored links" section for "Asp Net Server".

Advertising and Sponsorship

As every niche community Euroalert.net is very appealing to advertisers so it sells the advertising space to monetize as described in theory. At launch Euroalert.net affiliated to a broadly spread ad-network as Google's AdSense so it was possible to start selling ads even when the number of visits was very low. Although this networks conversion rates are lower than direct ad selling, it is really difficult for a small website to negotiate specific sponsorship contracts when they do not have the attention of a good number of users to trade with. Once the site becomes relevant to a community, sponsors usually come by themselves to buy the attention built.

Euroalert.net combines both ways of monetizing ad space, both general ad-networks and specific sponsorship contracts, usually from projects financed by the European Union that must disseminate results. The only condition to accept them in Euroalert is that ads must be both non intrusive and highly relevant to us-

ers. In this way, it is possible to maximize the revenue because users do not think of ads as something disturbing but helpful as they are able to know products and services relevant to them.

Mass collaboration

At this moment Euroalert does not provide any feature that fits formally into this category as described in theory. We can consider a primitive form of mass collaboration the case when a user sends a story to editors in order to promote their projects, activities with the aim of getting some attention from people interested in European Union affairs. This way Euroalert benefits from free highly relevant contents that monetizes by the three previously described models.

Anyway, as a demand of the community, Euroalert.net is planning to go more social and is developing features to create user generated contents that otherwise would not be viable and that are highly relevant to the community. For example Euroalert.net is now developing a directory of European Union projects where consortiums can fill in and update their information in order to promote their activities. All this information will also be free for users so the creators get free publicity and Euroalert.net more relevant contents than can be monetized with other business models.

This is the less developed model to the moment but the one with higher possibilities as it is only limited but by the imagination and the ability to catch the community, of course offering them something to win.

The screenshot shows the Euroalert.net website in a Mozilla Firefox browser window. The page title is "Euroalert.net API - Display current news from the European Union on your website for free". The browser address bar shows the URL "http://euroalert.net/en/widgets_news.aspx". The website header includes the Euroalert.net logo, navigation links (Hot Topics!, News, EU programmes, Calls for Proposals, Calls for Tenders, Widgets, Blog), and a search bar. The main content area is titled "Free EU current news widget" and contains two steps for installation:

1. Do you have your Euroalert.net API key?
If you do not have an **API key** yet, register with [Condelway](#) to get one. This key will grant you a connection to the Euroalert.net API for your website and therefore allow you to use our [free EU Calls for Proposals widget](#). If you already have one, continue to the next step.
2. Copy the following code where you wish to place the widget

```
<div id="area-to-display-eu-news"></div>
<script type="text/javascript" src="http://condelway.com/api/js/euroalertfreev2.js"></script>
<script type="text/javascript">
var EConfigNews = new EuroalertConfig ('euroalert-api-key', 'area-to-display-eu-news', Euroalert,
/*
Optional properties to configure the widget.
Delete slashes // from those configurations you wish to use.
*/
// EConfigNews.Pager = true;
// EConfigNews.Debug = false;
// EConfigNews.SetFilter (
//   Euroalert.FilterType.Category,
//   Euroalert.Category.Economy,
//   Euroalert.Category.Environment,
//   Euroalert.Category.Social
// );
EuroalertFree.Execute(EConfigNews);
</script>
```

On the right side of the page, there are two promotional banners:

- Euroalert.net in your web**: A banner asking if the user wants to display Euroalert.net contents on their website, with a "Register at Condelway" button and text: "to get our free EU News widget and our free EU Calls for Proposals widget." Below this, it says "We have subscription options from 30€/month using Euroalert.net web services technology".
- Euroalert.net by email**: A banner stating "Every week you can receive a summary of EU information from Euroalert.net by email" with "Free subscription" and "Unsubscribe" links.

At the bottom right, there is a "Sponsored links" section.

Conclusions

In this paper we have reviewed the four main business models of Web 2.0 applications. It may seem surprising that companies are gaining money by delivering services at no-cost for the final users. However, it is a reality that has mainly emerged with the Web 2.0 trend and it is necessary to know the intricacies of this subject.

As a case study, the Euroalert.net service offers a hybrid business model that combines the main ones. It opened an API in order to interoperate with other internet services and distribute its contents via widgets and web services. The service is run by a small company and offers free services for common users, while it charges subscribers with small fees. We consider that most of the Web 2.0 services offer a similar approach to be profitable while offering a free service to end users.

In the near future, Euroalert is planning to launch services that will improve the application of the fourth business model, by providing new community and participation services that are under development at this moment.

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