1

Social Network Programming

The most recent explosive growth on the World Wide Web (WWW) is *social networking*. Social networking allows you to make and connect to friends in unique and fun ways, in what are known as *build communities*. Consider the explosive growth of social networks such as MySpace and Facebook in the United States. This new paradigm of Web use is taking hold not only in the U.S., but also worldwide. Social networks are considered the new interface, the new transaction process of the WWW in large part because of the concept behind the word ''social,'' and its implementation through the development and use of *social network applications*. This book provides you with the skills necessary to create dynamic, viral, engaging applications for multiple platforms.

This book provides the programmer and (in the case of mash-up and authoring technologies) the casual or beginning tech-savvy person with the necessary knowledge to enable them to create their own social network applications.

Not all social networks allow third-party organizations or individuals to create social network applications. This capability really emerged with the Facebook API, which is why you see so many applications on Facebook.

Most recently, a new standard has emerged called OpenSocial. It was spear-headed by Google to be an Open Source multi-container (network) solution. It was explicitly created to allow developers to create applications that could be deployed on multiple social networks (containers), unlike the previous Facebook-only API. This is a powerful idea, because it provides the capability to create once and deploy to many. OpenSocial has the added advantage of being Open Source, which enables developers to take lead roles in how it will evolve. Many of the most popular social networks such as MySpace, hi5, Friendster, and others, are now supporting OpenSocial as the standard for application development. New social networks are signing on rapidly. New OpenSocial applications are being generated for these containers every day.

To create successful social networking applications, a developer must understand how each social network is run, and how users utilize these networks and their applications. This chapter reviews a number of OpenSocial container networks from a user's perspective. These interfaces can (and do) change, and what is shown in this discussion reflects the state as of this writing. However, even with changes, you will notice many of the same utilities and similar user interface (UI) features.

This chapter also examines good application goals, and shows you some application trends. You will learn about the most effective viral channels and application features. Later in this chapter, you will learn about marketing strategies and the important topic of user retention. This chapter concludes with some tips for good application development.

Social Network Platforms

Today, there are many social networks, and more are being created every day. The biggest players change frequently, depending on the country. Following are a few of the most popular social networks:

- ❑ MySpace
- ❑ hi5
- ❑ orkut
- ❑ Friendster
- ❑ imeem
- ❑ Freebar
- ❑ Netlog
- ❑ Linkedin
- ❑ Facebook

While many of these networks are general, some have targeted audiences. For example, LinkedIn is used mostly for professional networking. imeem is targeted (centered?) around music, artists, producers, and consumers.

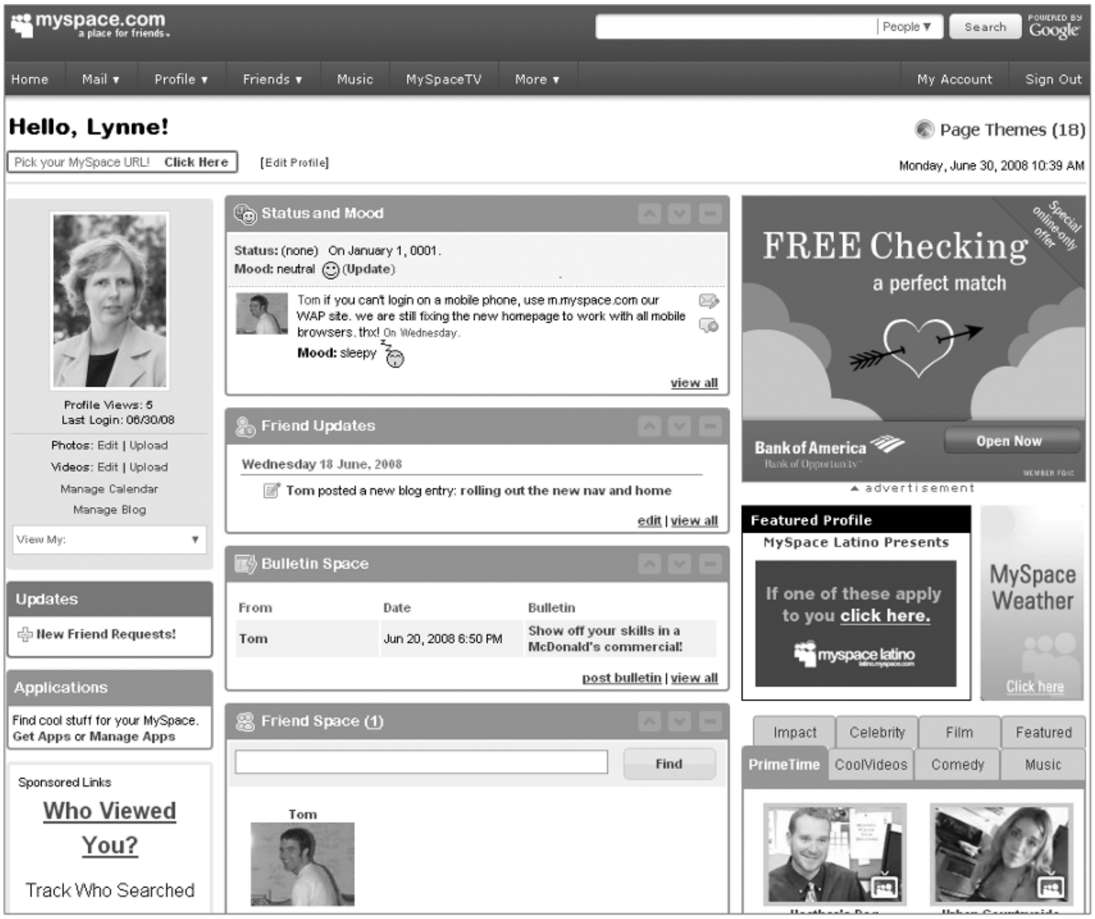
Now, let's take a brief look at some of the most popular social networks.

MySpace

MySpace is one of the earliest and most successful social networks in existence, often billed as the most popular social network. It has been around since 2003/2004, and its user demographics include a large percentage of U.S. teenagers. Fox Interactive Media has owned MySpace since 2005.

The Internet marketing research firm, comScore, compiles and provides marketing data and services to many of the largest Internet-based companies. In the United States, Fox is ranked fifth, above Facebook's number 16 in comScore's measure of the number of unique visitors. In terms of OpenSocial, MySpace was one of the initial launch partners, and offered its MySpace Developer Platform that supported OpenSocial in 2007. For many English-based applications, you will want to deploy your OpenSocial application on MySpace because of the sheer size of the potential audience.

Figure 1-1 shows the main interface, referred to in OpenSocial as the ''home'' view. This is seen by a typical MySpace user and consists of an upper navigation bar, followed by three vertical sections populated with boxed areas, each containing specific utilities. The left column is dominated by an image of the user and details about the user, followed by a listing of currently installed applications. The middle column contains MySpace-controlled utilities such as ‘‘Status and Mood’’ (both yours and your friends’), ‘‘Friend Updates’’ (what your friends are doing), ‘‘Bulletin Space,’’ and ‘‘Friend Spaces’’ (listing of friends). The far right column on the main interface displays installed applications running in this ‘‘home’’ view. You have access to some of these items through OpenSocial. For example, OpenSocial allows an application to get the current status of a person. Knowing where and how users on a network might use this feature can be important for your application. Becoming intimately familiar with a network from a user’s perspective is critical.



Hello, Lynne!

Monday, June 30, 2008 10:39 AM

Profile Views: 5
Last Login: 06/30/08

Find cool stuff for your MySpace.
Get Apps or Manage Apps

Status: (none) On January 1, 0001.
Mood: neutral (Update)

Tom if you can't login on a mobile phone, use m.myspace.com our WAP site. we are still fixing the new homepage to work with all mobile browsers. thx! On Wednesday.
Mood: sleepy

Wednesday 18 June, 2008

Tom posted a new blog entry: rolling out the new nav and home

From	Date	Bulletin
Tom	Jun 20, 2008 6:50 PM	Show off your skills in a McDonald's commercial!

Figure 1-1: MySpace main user interface ““home’’ view’’

The main MySpace navigation bar (which remains on most pages) contains the following links:

- Home takes you to the main (’’home’’) view shown in Figure 1-1.
- Mail takes you to the interface that lets you send and receive messages with others on MySpace
- Profile contains the information the user chooses to ‘‘share’’ with friends and others on the network. The ‘‘Tom’’ user profile is provided to everyone as a friend when you join MySpace.

- Friends shows both current friends and ways to find new friends.
- Music shows media pages delivered by MySpace (much like the media you see at the Yahoo! Web site).
- More displays a series of MySpace-sponsored applications, as shown in Figure 1-2.

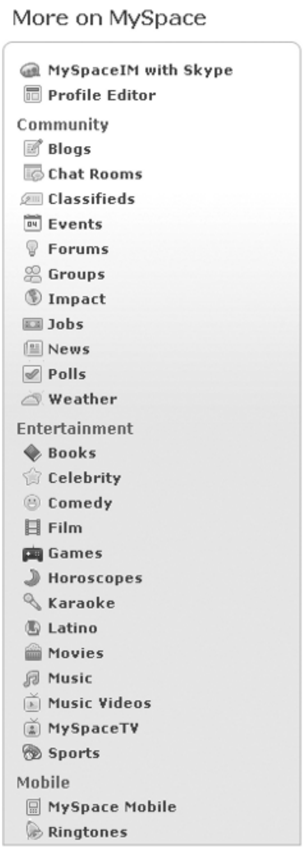


Figure 1-2: More applications sponsored by MySpace

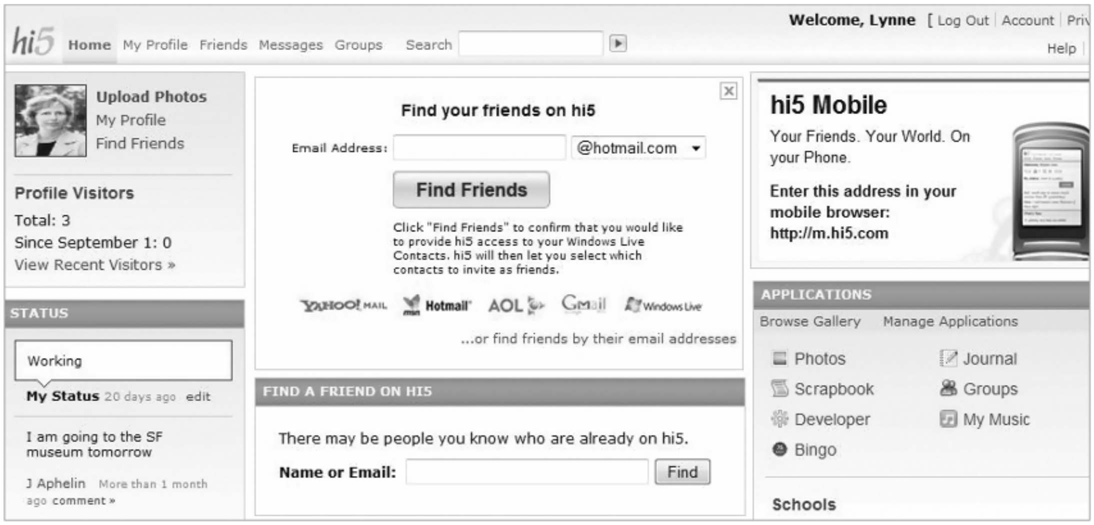
As users add more information, applications, and friends, their profiles grow in size. But, regardless of the amount, the information is divided into categories showing information about the user on the left-hand side of the profile page (such as interests, details, schools, networking, and so on). On the right side of the profile page are categories for Blurbs, Friends' Comments, and Friend Space. Also featured on the profile are user-added applications that are deployed to run in the ''profile'' view. When users decide to add an application, they can determine if it appears in their profile or not.

Later in this chapter, you will learn about the size limitations of applications on different views for all of the social networks, including MySpace. It is important to keep these restrictions in mind when developing your application.

hi5

Launched in 2003, hi5 is one of the world’s largest social networks, ranked as a top 20 Web site globally, and the number 1 social network in 25 countries across Latin America, Europe, Asia, and Africa. According to comScore, more than 56 million individuals every month visit hi5, which is currently available in 27 language options. Recently, hi5 experienced one of the fastest growth rates of social networks. hi5 is a privately held company, headquartered in San Francisco, California.

Figure 1-3 shows the main interface (or ‘‘home’’ view) seen by a typical hi5 user. Note that this interface consists of an upper navigation bar, as well as three vertical sections populated with boxed areas, each containing specific utilities.



Total: 3
Since September 1: 0

Working
My Status 20 days ago edit

I am going to the SF museum tomorrow
J Aphelin More than 1 month ago comment »

Email Address: @hotmail.com

Click "Find Friends" to confirm that you would like to provide hi5 access to your Windows Live Contacts. hi5 will then let you select which contacts to invite as friends.

...or find friends by their email addresses

There may be people you know who are already on hi5.
Name or Email:

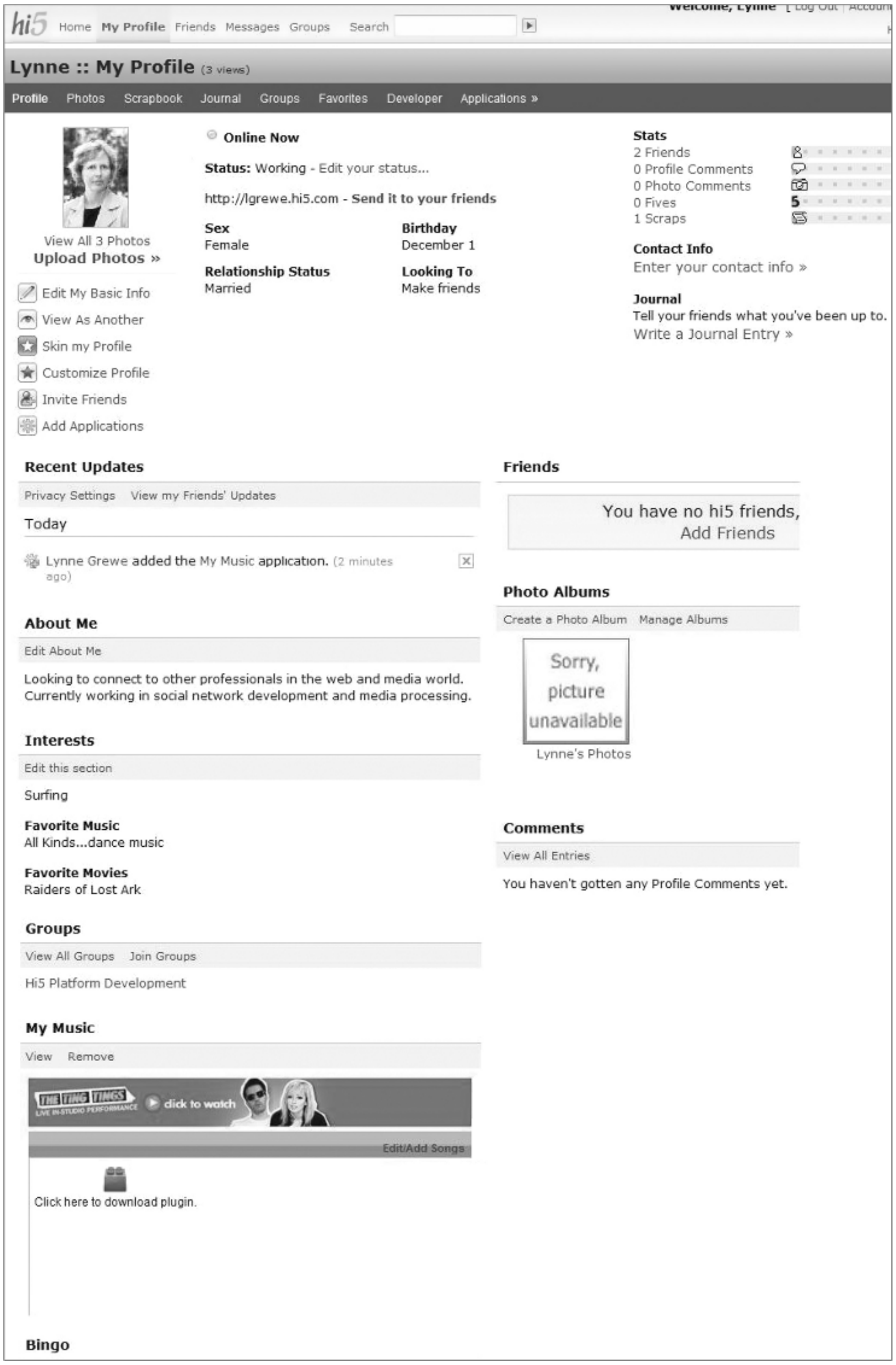
Your Friends. Your World. On your Phone.

Enter this address in your mobile browser: http://m.hi5.com

Figure 1-3: hi5 main user interface (‘‘home’’ view)

The main navigation bar that appears on most pages seen by the user has links for Home (home view), Profile (profile view), Friends (listing of friends), Messages, and Groups (user and friend’s groups subscribed to). The left column is dominated by an image of and details about the user. The middle column contains such hi5-controlled utilities as ‘‘Find Friends.’’ The far-right column features a list of installed applications.

As shown in Figure 1-4, a user profile page has a secondary navigation bar that provides links to elements such as Profile (profile info), Photos (photo albums), Scrapbook (where you and your friends can make postings), Journal (where you can make journal entries and share with friends), Groups (that is, topical groups of which users can be members), Friends (that is, a list of a user’s friends), Developer (this is present if the user has registered as a developer, and links to main development page), and Applications (currently installed applications, a link to a gallery, featured applications, and so on). Underneath this navigation bar is the current user profile data, with the current applications installed that run in ‘‘profile’’ view appearing beneath the navigation bar.



Lynne :: My Profile (3 views)

View All 3 Photos
Upload Photos »

Online Now

Status: Working - Edit your status...

http://lgrewe.hi5.com - **Send it to your friends**

Sex Female	**Birthday** December 1
Relationship Status Married	**Looking To** Make friends

Stats
2 Friends
0 Profile Comments
0 Photo Comments
0 Fives
1 Scraps

Contact Info
Enter your contact info »

Journal
Tell your friends what you've been up to.
Write a Journal Entry »

Recent Updates

Today

Lynne Grewe added the My Music application. (2 minutes ago)

About Me

Looking to connect to other professionals in the web and media world. Currently working in social network development and media processing.

Interests

Surfing

Favorite Music
All Kinds...dance music

Favorite Movies
Raiders of Lost Ark

Groups

Hi5 Platform Development

My Music

Click here to download plugin.

Bingo

Friends

You have no hi5 friends,
Add Friends

Photo Albums

Lynne's Photos

Comments

You haven't gotten any Profile Comments yet.

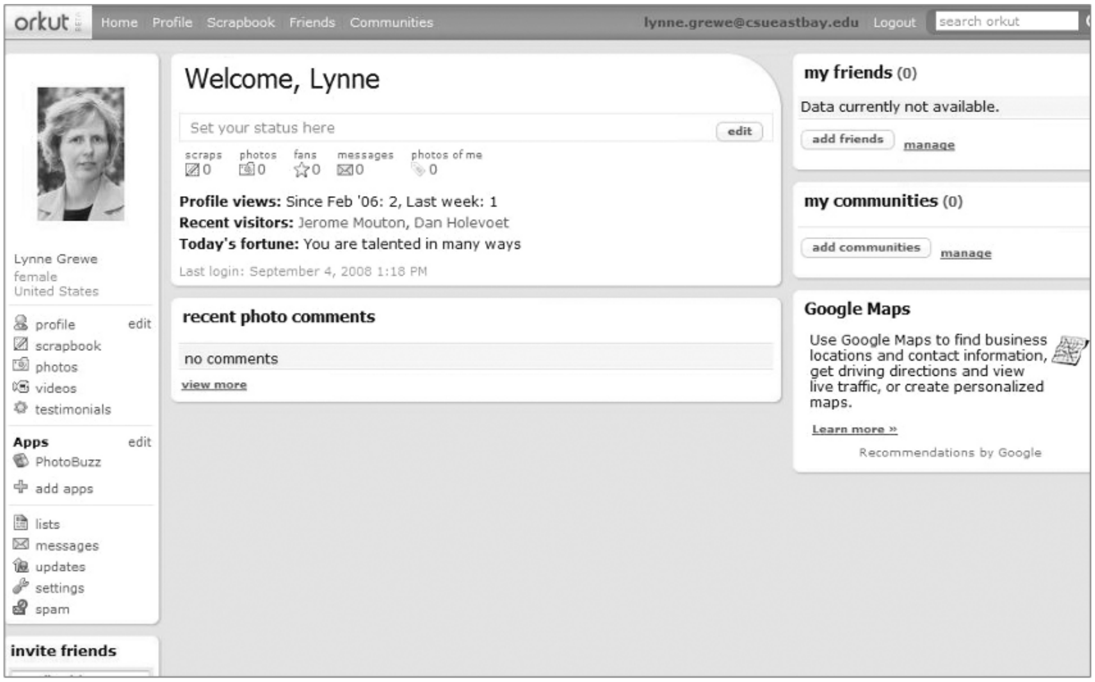
Figure 1-4: Profile in hi5

Of particular interest in a user's hi5 profile is the Applications link on the navigation bar. Clicking this link takes you to a page that first displays hi5-featured applications, followed by a list of applications currently installed. Featured applications can be determined by factors such as applications most recently installed by a user's friends.

orkut

orkut was founded in 2004 and, as of this writing, has more than 50 communities, with more than 37 million total members and nearly 1.3 million daily visitors. The majority of users are from Brazil, followed by smaller minorities in India and United States, as well as (to a much lesser degree) a handful of other countries. The large majority of users are in the age bracket of 18-30 years old.

Figure 1-5 shows the main interface (''home'' view) that consists of an upper navigation bar, and, underneath the navigation bar, three vertical sections populated with boxed areas that contain links to specific utilities.



Welcome, Lynne

Set your status here

Profile views: Since Feb '06: 2, Last week: 1
Recent visitors: Jerome Mouton, Dan Holevoet
Today's fortune: You are talented in many ways
Last login: September 4, 2008 1:18 PM

Lynne Grewe
female
United States

my friends (0)
Data currently not available.

my communities (0)

recent photo comments
no comments

Google Maps
Use Google Maps to find business locations and contact information, get driving directions and view live traffic, or create personalized maps.
Recommendations by Google

Figure 1-5: orkut ''home'' page

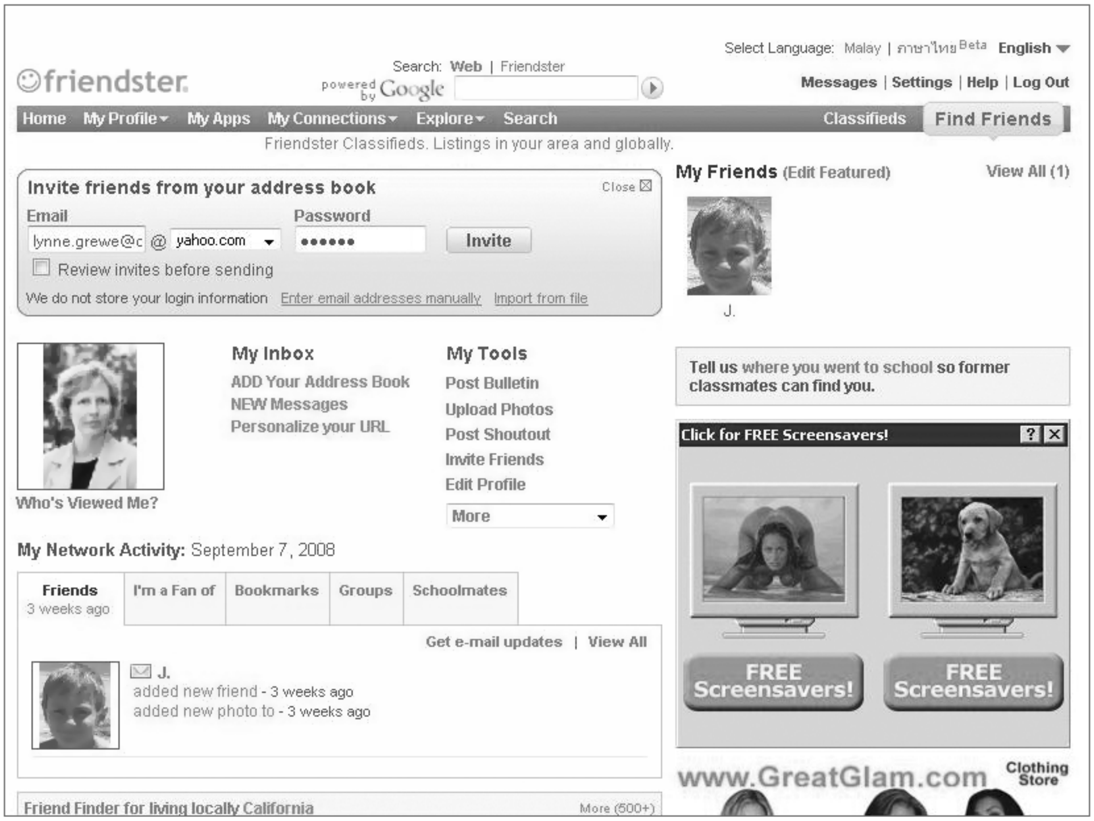
The main navigation bar provides links for Home (home view), Profile (profile view), Scrapbook (user postings such as twitters or blogs), Friends (listing of friends), and Communities (user-joined communities).

The left column on the ''home'' page shows an image of the user, followed by details about the user. A list of currently installed applications appears below the user profile information. The middle column provides information about the user's status, people who have visited the user's profile, and more. The right column contains a list of friends and communities a user belongs to.

Friendster

Launched in 2002, Friendster was one of the earliest social networks, appearing on the scene even before MySpace. With more than 80 million members worldwide, Friendster is a leading global online social network that is popular in Asia. Like hi5, Friendster is experiencing a good growth rate. In 2008, Friendster announced plans for users in some Asian countries to be eligible to subscribe to ‘‘Friendster Text Alerts,’’ which are Short Message Service (SMS) text messages users can receive on mobile phones to notify them of friend requests, new messages, and more. This is an intriguing possible new arena of contact for social networking applications. Friendster is headquartered in San Francisco, California.

Figure 1-6 shows the main interface (‘‘home’’ view) of Friendster that consists of an upper navigation bar, and, underneath the navigation bar, two vertical sections populated with areas that contain links to specific utilities.



Friendster Classifieds. Listings in your area and globally.

Email: lynne.grewe@c @ yahoo.com

Password: ••••••

□ Review invites before sending

We do not store your login information

Tell us where you went to school so former classmates can find you.

My Network Activity: September 7, 2008

J.
added new friend - 3 weeks ago
added new photo to - 3 weeks ago

Figure 1-6: Friendster’s main interface, ‘‘home’’ view

The main navigation bar that appears on most pages seen by the user has links for Home (home view), My Profile (profile view), My Apps (currently installed applications), My Connections (friends, groups, and so on), Explore (people, photos, video, and so on), and Search.

The large left column below the navigation bar shows the user's image, followed by information about Friends, Groups, and so on. The smaller right column also features My Friends, Bulletins, and some advertising.

imeem

Launched in 2004, imeem is an example of a *targeted social network*, meaning that it has a specific interest or targeted audience. In this case, imeem is focused on providing users with the capability to interact by watching, posting, and sharing all kinds of digital media, particularly music. Unlike YouTube (which concentrates on the sharing of video), imeem has the look and feel of ''traditional'' social networks like MySpace, but is focused around music and media. Like all of the other social networks mentioned thus far, imeem generates revenue through advertising, but also generates income by providing the capability for users to subscribe to additional services. imeem has reported more than 25 million visitors per month, with more than 65,000 new users every day. imeem is a privately held company, headquartered in San Francisco, California.

As of this writing, imeem was allowing applications only to run in a *sandbox* (meaning that the applications are not available for installation and use by general users). However, because imeem is one of the larger ''targeted'' social networks and provides different challenges for application development, it is worth mentioning here. imeem does have plans to deploy live in the near future, and details will be posted on imeem's Web site (`www.imeem.com`). imeem also currently offers a REST-like Web service that developers may use to access some data. Currently, imeem supports OpenSocial 0.7, but, with the RESTful API that is part of OpenSocial 0.8, it is expected that this functionality will be subsumed by OpenSocial 0.8 when imeem supports it.

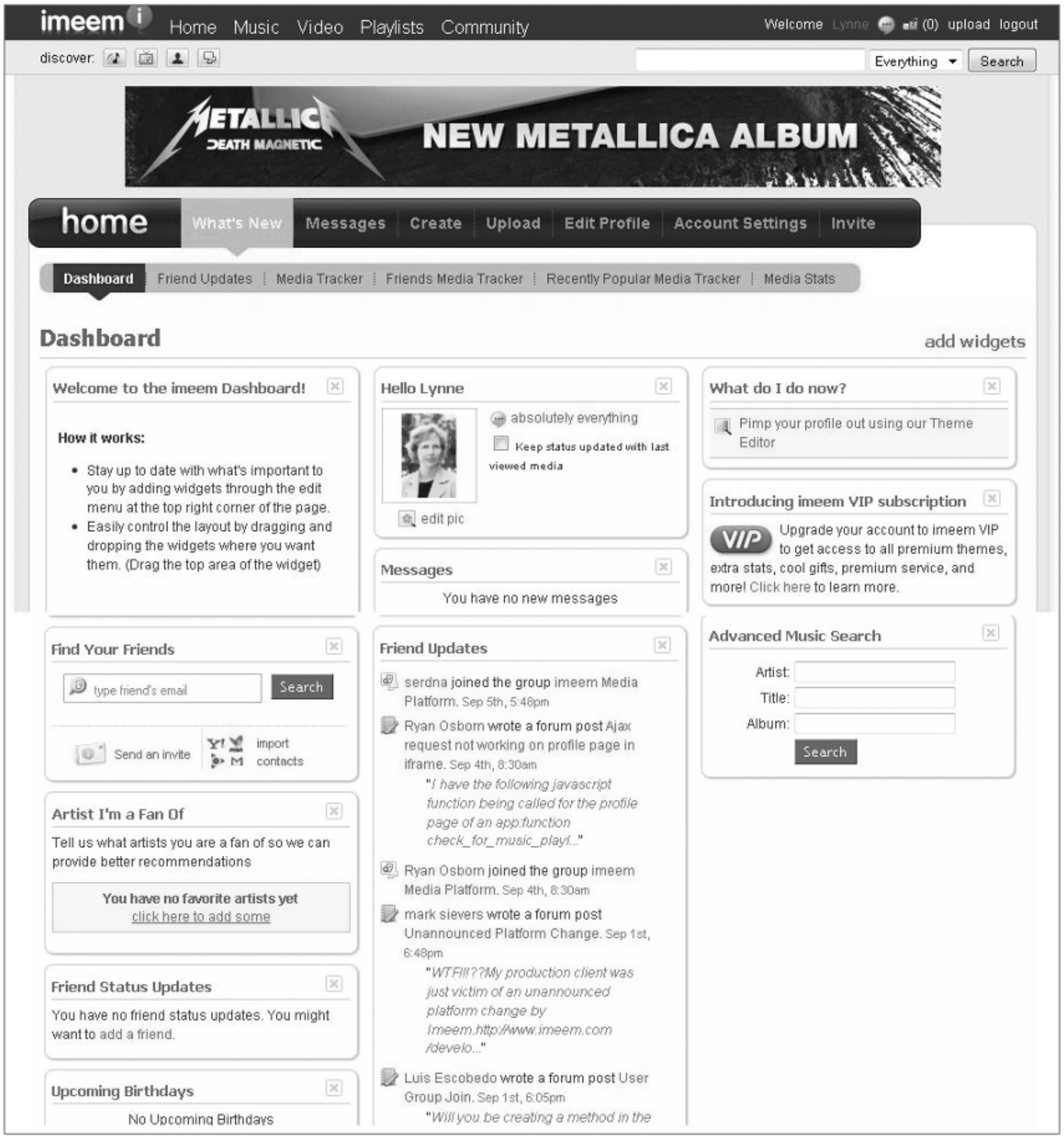
Figure 1-7 shows imeem's main interface (''home'' view) that consists of an upper main navigation bar, with a second navigation bar positioned directly below. Three vertical sections underneath the navigation bars are populated with boxed areas that contain specific utilities.

The main navigation bar that appears on most pages seen by the user has links for Home (home view), Music, Video, Playlists, and Community. The second menu bar changes with the page being viewed. For example, on the Home page shown in Figure 1-7, the second menu bar deals with user-related issues such as messages and uploads of media. A user profile page, on the other hand, would have a secondary navigation bar with links for elements such as Profile (profile info), Playlists, Music, Video, Photos, Games, Blog, Friends, Groups, and, in the case of developers, Applications.

Unlike the other social networks, there is no discernible trend to the organization of the utilities in the three columns appearing below imeem's navigation bars. However, the columns feature similar kinds of utilities, such as Friend Status Updates, Friend Updates, and information about the user being featured on the page. In addition to these, there are media-related utilities such as ''Media Tracker'' and ''Artists I am a Fan of.'' imeem includes a number of media-related and music-related utilities for such tasks as the creation and sharing of music playlists. Applications that use this kind of social media would be well-suited to imeem users.

Freebar

A number of predominately non-English or foreign-based social networks such as IDtail, YiQi, Hyves, Mail.ru, and Freebar are now OpenSocial containers. Freebar, a social network in Italy, is a newer player. It sprang out of a local Web community site focused regionally on Naples, Italy. Freebar now has approximately 500,000 members, predominately from Italy. Freebar is self-described as being youth-oriented, and has physical presence at youth-oriented events in Italy. As one of the first supporters of OpenSocial in Europe, Freebar is hoping to attract developers and new users alike with interesting application offers. Even though Freebar is a smaller beginning network, application developers may take advantage of Freebar's new evolution in an emerging market.



Welcome to the imeem Dashboard!

How it works:

- Stay up to date with what's important to you by adding widgets through the edit menu at the top right corner of the page.
- Easily control the layout by dragging and dropping the widgets where you want them. (Drag the top area of the widget)

Hello Lynne

absolutely everything

□ Keep status updated with last viewed media

What do I do now?

Pimp your profile out using our Theme Editor

Introducing imeem VIP subscription

VIP Upgrade your account to imeem VIP to get access to all premium themes, extra stats, cool gifts, premium service, and more! Click here to learn more.

Messages

You have no new messages

Find Your Friends

Friend Updates

serdna joined the group imeem Media Platform. Sep 5th, 5:48pm

Ryan Osborn wrote a forum post Ajax request not working on profile page in iframe. Sep 4th, 8:30am

"*I have the following javascript function being called for the profile page of an app:function check_for_music_playl...*"

Ryan Osborn joined the group imeem Media Platform. Sep 4th, 8:30am

mark sievers wrote a forum post Unannounced Platform Change. Sep 1st, 6:48pm

"*WTF!!!??My production client was just victim of an unannounced platform change by Imeem.http://www.imeem.com/develo...*"

Luis Escobedo wrote a forum post User Group Join. Sep 1st, 6:05pm

"*Will you be creating a method in the*

Advanced Music Search

Artist I'm a Fan Of

Tell us what artists you are a fan of so we can provide better recommendations

You have no favorite artists yet
click here to add some

Friend Status Updates

You have no friend status updates. You might want to add a friend.

Upcoming Birthdays

No Upcoming Birthdays

Figure 1-7: imeem's home page

Figure 1-8 shows Freebar's main interface (''home'' view) that primarily consists of an upper navigation bar. A unique feature of Freebar is a list of people who have visited the user profile, called the user's ''space.'' This is similar to a feature seen on the LinkedIn professional social network. The main navigation bar takes the user to My.Space (the user profile page), Chat, Video, Forums, and Friends.

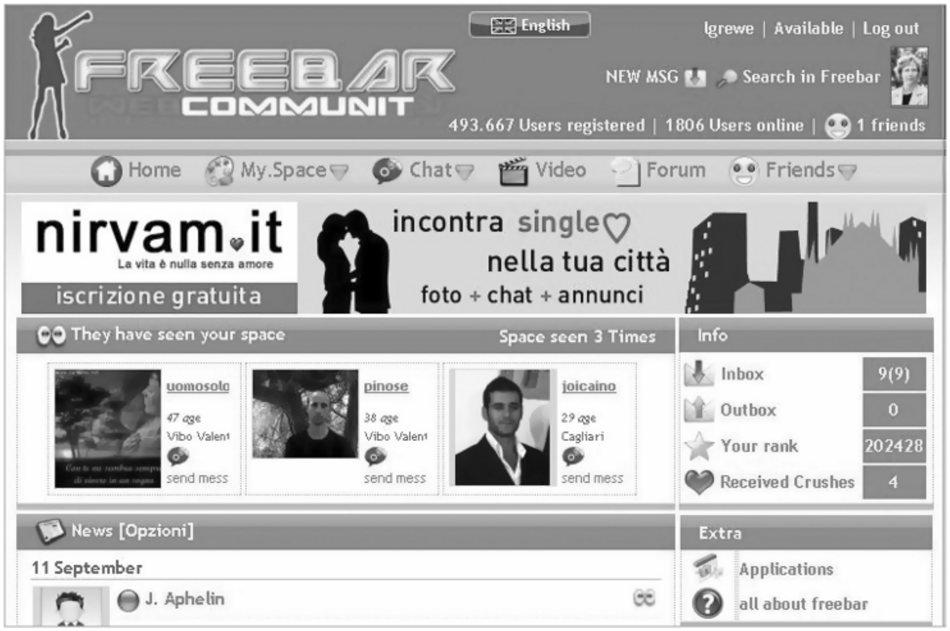


Figure 1-8: Freebar's main interface (the ''home'' view)

The user's profile page can be accessed by clicking on the My.Space link. The other pages are very similar in nature (like the Friends page) to what you see in other networks.

Netlog

Netlog is one of the leading European social networks. Netlog is self-described as being specifically targeted at European youth. It has been developed by Netlog NV, based in Ghent, Belgium. Netlog is currently available in 20 languages, and has more than 35 million members throughout Europe. Because of the ethnic diversity in Europe, Netlog supports many different languages, as evidenced on the opening page shown to new visitors to the site. As shown in Figure 1-9, this page queries the visitor for a preferred language. Netlog is newer to OpenSocial, and, as of this writing, has recently begun its support for applications. Because of its large user base, it will likely become a desirable container for application deployment.

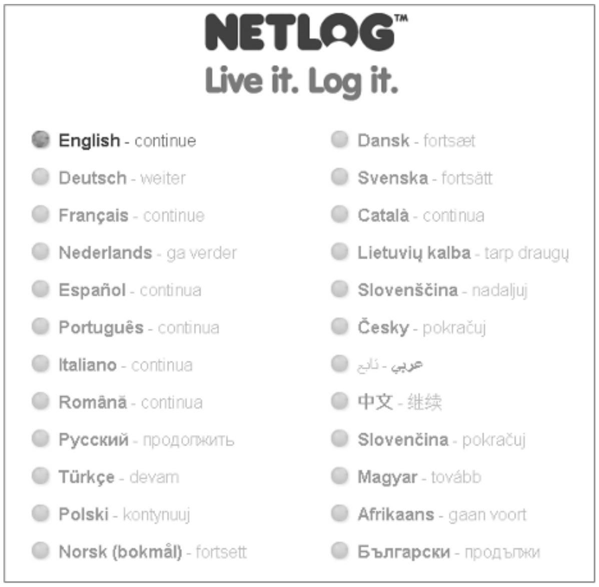
Figure 1-10 shows the main interface for a user on Netlog. At the top of the page is a main navigation bar, with a secondary bar present on most main pages. The main navigation bar includes links to Explore (media, events, applications), Manage (your info, your profile, your applications, and so on), Logs (notifications and news about your friends, clans/groups, and so on), Messages (a mail Inbox), Friends (requests, add friends, and so on), and Settings (such as privacy, and so on). Netlog relies heavily on the secondary navigation bars, where the user clicks on the Application's link once at the main user's profile page in order to see applications being used.

The column layout appearing below these navigation bars includes such familiar utilities as Video, Blogs, News, New Users, and so on.

Yahoo!

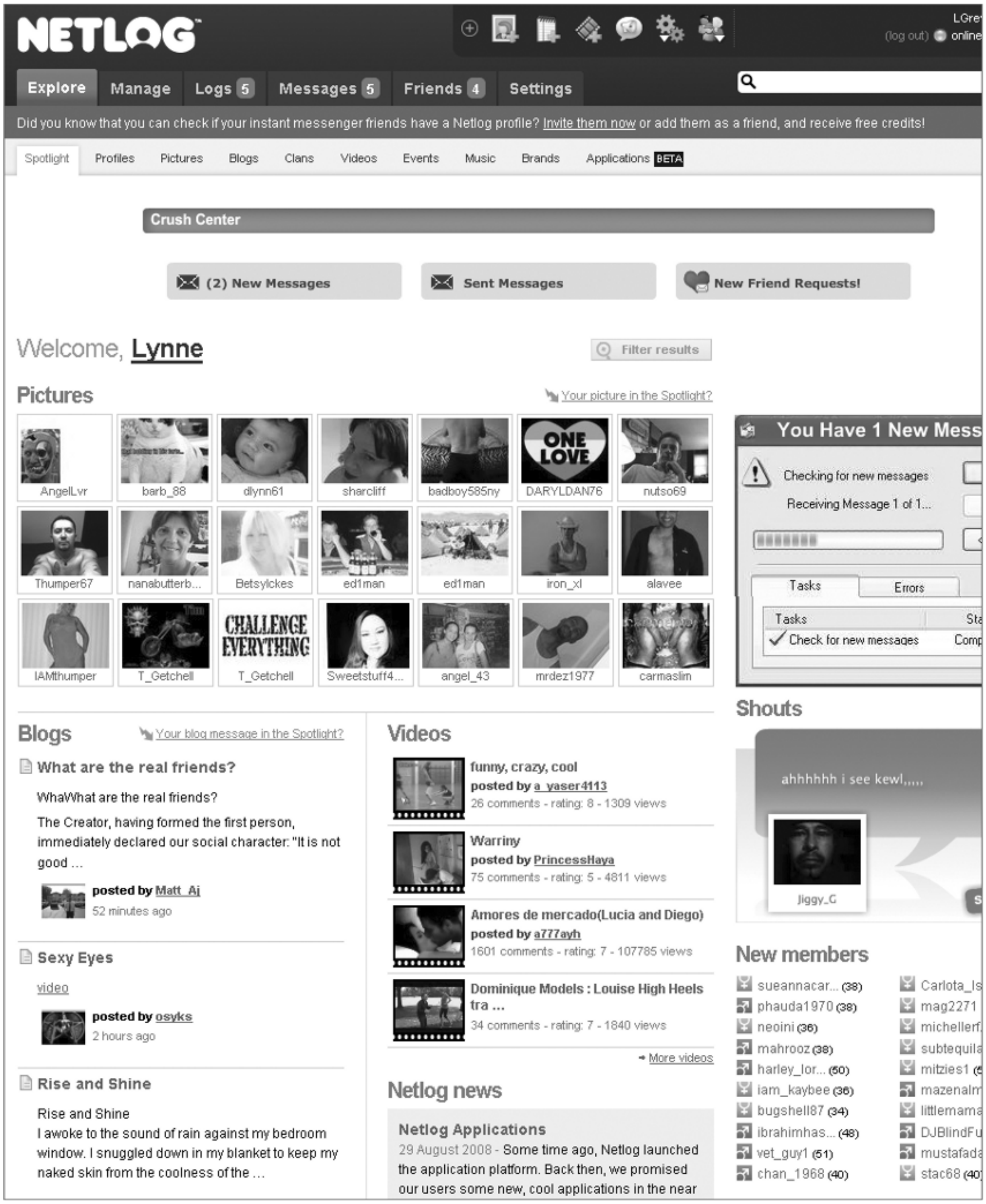
As one of the largest Web companies, Yahoo! has been around since the mid-1990s. It has recently announced the creation of the Yahoo! Open strategy, called Y!OS. This opens up Yahoo!'s social infrastructure with a set of unifying APIs for social application development. Part of this is a unifying experience for the user, much like a social network. Following are some of the services that Yahoo! is integrating under Y!OS:

- ❑ Yahoo! Music
- ❑ Flickr
- ❑ Yahoo! Search (search monkey)
- ❑ del.icio.us
- ❑ Yahoo! Shopping
- ❑ YUI (Yahoo! User Interface)
- ❑ Yahoo! Maps
- ❑ Yahoo! Messenger
- ❑ Yahoo! Travel
- ❑ Yahoo! Answers
- ❑ Yahoo! Mail
- ❑ Yahoo! Blueprint Platform (Mobile applications)
- ❑ Yahoo! Contacts (Yahoo! Address book)



● **English** - continue
○ **Deutsch** - weiter
○ **Français** - continue
○ **Nederlands** - ga verder
○ **Español** - continua
○ **Português** - continua
○ **Italiano** - continua
○ **Română** - continua
○ **Русский** - продолжить
○ **Türkçe** - devam
○ **Polski** - kontynuuj
○ **Norsk (bokmål)** - fortsett
○ **Dansk** - fortsæt
○ **Svenska** - fortsätt
○ **Català** - continua
○ **Lietuvių kalba** - tarp draugų
○ **Slovenščina** - nadaljuj
○ **Česky** - pokračuj
○ عربي - تابع
○ 中文 - 继续
○ **Slovenčina** - pokračuj
○ **Magyar** - tovább
○ **Afrikaans** - gaan voort
○ **Български** - продължи

Figure 1-9: Netlog's entrance page for new users, querying the user for a language preference



Did you know that you can check if your instant messenger friends have a Netlog profile? Invite them now or add them as a friend, and receive free credits!

What are the real friends?

WhaWhat are the real friends?

The Creator, having formed the first person, immediately declared our social character: "It is not good ...

posted by Matt_Aj
52 minutes ago

Sexy Eyes

video

posted by osyks
2 hours ago

Rise and Shine

Rise and Shine
I awoke to the sound of rain against my bedroom window. I snuggled down in my blanket to keep my naked skin from the coolness of the ...

funny, crazy, cool
posted by a_yaser4113
26 comments - rating: 8 - 1309 views

Warriny
posted by PrincessHaya
75 comments - rating: 5 - 4811 views

Amores de mercado(Lucia and Diego)
posted by a777ayh
1601 comments - rating: 7 - 107785 views

Dominique Models : Louise High Heels tra ...
34 comments - rating: 7 - 1840 views

ahhhhhh i see kewl,,,,,

Netlog Applications

29 August 2008 - Some time ago, Netlog launched the application platform. Back then, we promised our users some new, cool applications in the near

Figure 1-10: Netlog's main interface page

Extending to 233 countries, Yahoo! has more than 500 million monthly users, and 180 billion monthly page views. These are impressive numbers for an application developer to possibly leverage.

A main feature of Y!OS for the application developer is the Yahoo! Application Platform called YAP. Chapter 9 provides more details on this and other emerging technologies.

Other Networks

Other networks are involved with OpenSocial, many of which are in the beginning stages of OpenSocial support and are not yet live. The OpenSocial Web site (`http://code.google.com/apis/opensocial/gettingstarted.html`) provides a current listing of all the supporting networks. Now that you are familiar with available social networks on the Web, let's get a broad perspective of applications that can be developed for deployment on these containers.

Social Network Applications

A *social network application* is, as the name suggests, an application created and deployed on a social network, often by third-party developers. You may see this term in reference to applications that, while not on a social network, have social interactions. This book refers to these more generically as *social applications*. Some of the existing APIs used to create social interactions outside of a pure social network such as Google Friend Connect are not covered in this book. Chapter 9 discusses the Yahoo! Open Strategy (Y!OS) platform that can be used outside of a social network. In addition, OpenSocial REST (a topic examined later in the book) can be used outside of the social network application. Your imagination is the limit for what a social network application can do. Many different kinds of applications exist today. If you were to browse a list of available applications, you most likely would see categories such as Entertainment/Fun, Shopping, Sports, Financial, Travel, and more. These types of categories are not standardized between networks. There are thousands of applications available on MySpace and hi5, and, within each category, there may be many kinds of applications.

For example, consider the category of Money/Finance. In this category, you might see applications that track current stock prices, help you to maintain your personal finances, help you trade stock with others, help you create fictional portfolios, or help you loan money to friends.

In the category of Entertainment, you would most likely see many diverse applications. There are applications such as iLike that rates what music/media you like, and shares this with friends. Another example, ''Kiss'' by KlickNation, lets you virtually ''kiss'' users of the application.

The goals of an application can be varied. In the beginning stages of social network application development, many of the applications were designed for a general audience, and simple (if not often silly) in nature. Today, the trend seems to be leaning toward applications that are not meant to solely be popular (or *viral*), but also have retention and long-term use with more complex and longer interactions. Applications involving music/media, business, and education are examples of this mold. One example currently under development is an application named ''USpeak,'' that is being created for learning ''social'' foreign languages.

A social application may be considered at its best when it is literally ''social.'' This means the application has and encourages interaction between fellow friends and users of the application. It may also use social data. There are many ways that an application can achieve this, as will be discussed later in this chapter.

While it is true you could create a social network application that has no social interactions, it would not really be social. Throughout this book, you will learn how to make truly social applications for the most popular social networks.

Let's lay some groundwork, however, by examining how users find and install applications, as well as how social applications are controlled by networks.

Application Discovery

How users can find and then install your application is important. To a large extent, each network controls this. On most networks, ''finding'' an application can be done via the following operations:

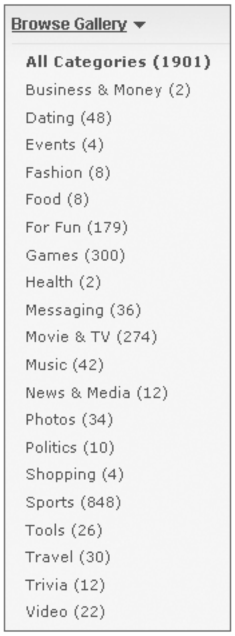
- Browsing a subject/category index
- Searching through the use of keywords
- Being invited by a friend
- Viewing application on a user's profile
- Using a feed posting
- Using network-sponsored applications
- Using a New Application index
- Using a Most Popular Application index
- Using direct marketing (such as through email)
- Using Web site postings
- Using cross-application marketing
- Using paid advertisements
- Using purchased installments

Figure 1-11 shows a browsing index on hi5. Note that each network will have its own categorizations. Although there is no standard, networks do share many similar categories. When you create and register your application with a network, you are usually able to signify what category (or categories) your application belongs to. As you will see in Chapter 2, you are often limited to a few selections.

You may search for an application by using a simple search interface that allows you to enter a search term. Ranking of search results is done differently for each network; Figure 1-12 shows an example from hi5. The search algorithms take into account metrics such as the number of active (daily) users, the number of installs, keyword matching, recent application updates, and so on, when returning search results.

In addition to the category index, some networks offer ''popular'' or ''new application'' listings in search return lists. Popularity is often determined by the number of active users. New applications are typically listed with more recent appearing first, and, after some network-specific amount of time, being removed from the list.

Users are often introduced to a new application through an invitation by a friend. Most networks and applications allow users to create a personalized message with the invitation. Application developers should keep this personalization feature in mind. Another well-used feature of friend invitations is the creation of a graphic depicting the friend, or, better yet, something personalized to send with the invitation. Anything you can do to entice the user to install your application is a good idea.



Browse Gallery ▾

- All Categories (1901)
- Business & Money (2)
- Dating (48)
- Events (4)
- Fashion (8)
- Food (8)
- For Fun (179)
- Games (300)
- Health (2)
- Messaging (36)
- Movie & TV (274)
- Music (42)
- News & Media (12)
- Photos (34)
- Politics (10)
- Shopping (4)
- Sports (848)
- Tools (26)
- Travel (30)
- Trivia (12)
- Video (22)

Figure 1-11: hi5 browsing index

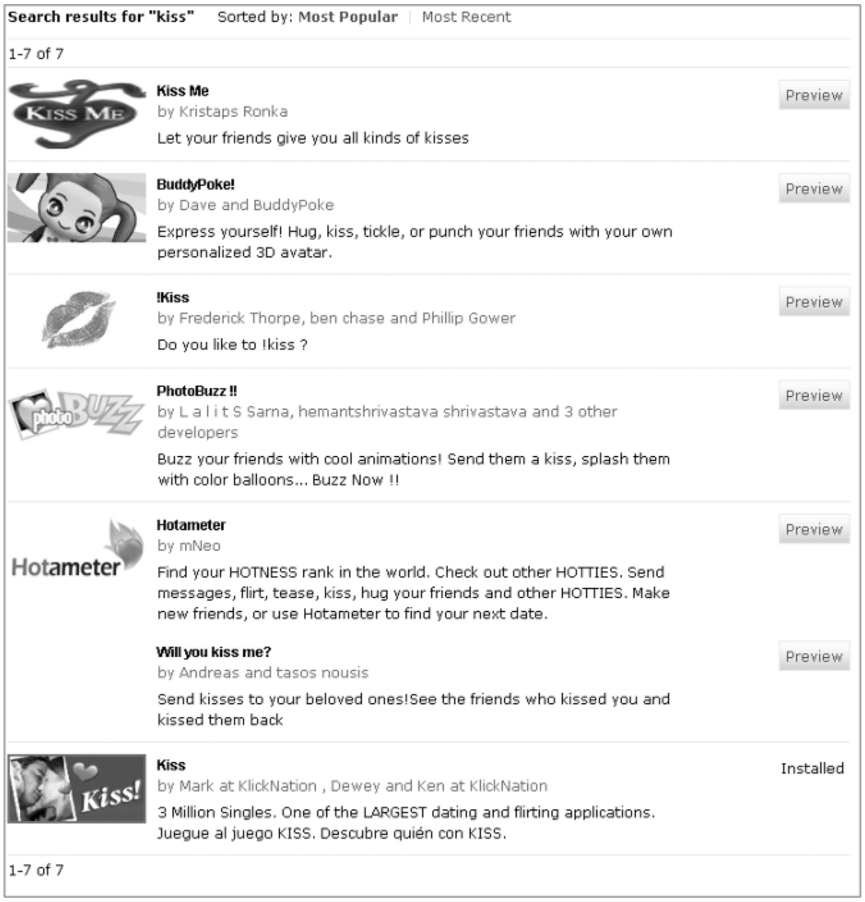
Notifications of what your friend is doing offer another way to spread the word about a new application. This is one of the more intriguing ways to introduce new users to your application. Think of it as using ''peer pressure.'' What teenager doesn't want to use an application when he or she sees friends using it? Let's face it, this works even with non-teenagers. The posting of notifications about friend usage of an application is a great way to use feeds to market the application. Some networks even have built-in facilities to allow users to invite friends to use any of the applications they have installed.

A new trend is for networks to sponsor applications at the top of the search return list (as you sometimes see when using Yahoo! and Google search engines). Having your work as a developer become a network-sponsored application is another way to gain exposure for your efforts. Where and how sponsored applications appear on each network is different. They can appear in news feeds and search results. They can also appear as cross-application advertising — an arrangement under which you are not paying the network, but instead the application owner or the advertising provider the application has registered with.

Later in this chapter, you will learn about some options for this and other kinds of marketing for the discovery of applications.

Application Installation

On most networks, a user must actively choose to install an application before he or she can use it. Direct application contact by a non-user of the application is generally not allowed on social networks. There can be exceptions to this. For example, orkut currently allows users to land on a ‘‘canvas’’ page of a non-installed application and view it.



Search results for "kiss" Sorted by: Most Popular | Most Recent

1-7 of 7

Kiss Me
by Kristaps Ronka
Let your friends give you all kinds of kisses

BuddyPoke!
by Dave and BuddyPoke
Express yourself! Hug, kiss, tickle, or punch your friends with your own personalized 3D avatar.

!Kiss
by Frederick Thorpe, ben chase and Phillip Gower
Do you like to !kiss ?

PhotoBuzz !!
by L a l i t S Sarna, hemantshrivastava shrivastava and 3 other developers
Buzz your friends with cool animations! Send them a kiss, splash them with color balloons... Buzz Now !!

Hotameter
by mNeo
Find your HOTNESS rank in the world. Check out other HOTTIES. Send messages, flirt, tease, kiss, hug your friends and other HOTTIES. Make new friends, or use Hotameter to find your next date.

Will you kiss me?
by Andreas and tasos nousis
Send kisses to your beloved ones!See the friends who kissed you and kissed them back

Kiss
by Mark at KlickNation , Dewey and Ken at KlickNation
3 Million Singles. One of the LARGEST dating and flirting applications. Juegue al juego KISS. Descubre quién con KISS.
Installed

1-7 of 7

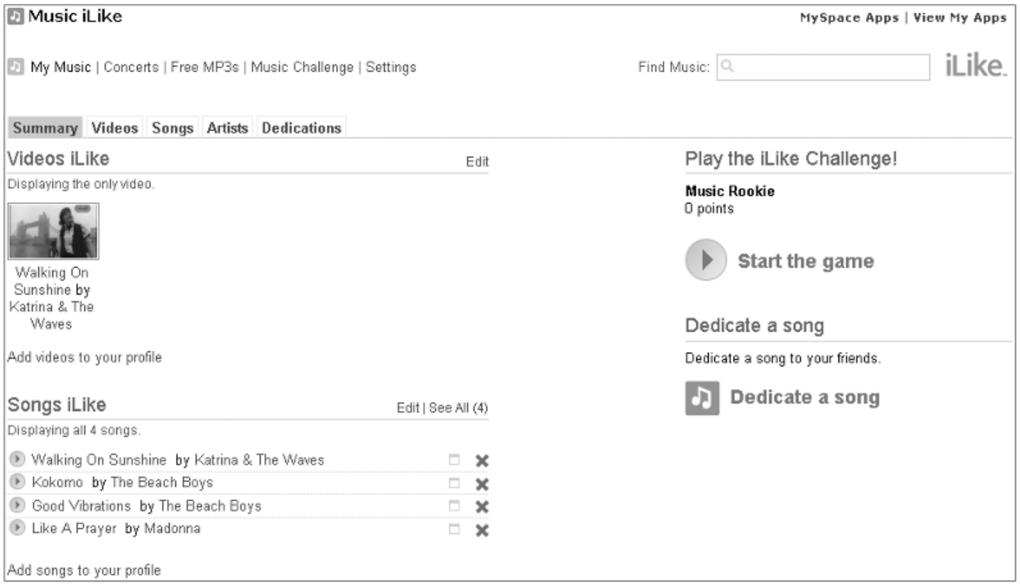
Figure 1-12: Results for searching on ‘‘kiss’’ for applications on hi5

Like many modern Web applications, the installation of a social network application is relatively painless. Because social networks are often very concerned about the user’s level of trust, installation usually involves a stage where permissions are asked from the user to allow the application to ‘‘do’’ or ‘‘access’’ various elements related to the user’s account. These typically include where the application appears on the user’s pages, and how the application can contact the user. These options can be different on each social network.

After an application has been added by a user, it will appear in the user’s pages. That appearance is controlled by the social network platform, as well as selected options the user made during application installation. Let’s take a look at a few popular social networks, and how applications appear within them.

Application Appearance

Once an application is installed, it can appear in multiple places in a user’s account.. The location of an application within the interface is different on each social network, and can possibly be influenced by user permission/account settings. As part of its ''GUI design,'' a network will often designate an area where installed applications are listed for a user. Figure 1-13 and Figure 1-14 show how the iLike application is displayed in different views on a MySpace user's account. Typically, when creating an application, you can associate with it a logo that also appears in the user pages. Let's take a look at how a number of popular networks designate application appearance.


Music iLike
MySpace Apps | View My Apps
My Music | Concerts | Free MP3s | Music Challenge | Settings
Find Music:
iLike.
Summary
Videos
Songs
Artists
Dedications
Videos iLike
Edit
Walking On Sunshine by Katrina & The Waves
Add videos to your profile
Songs iLike
Edit | See All (4)
Add songs to your profile
Play the iLike Challenge!
Music Rookie
0 points
Start the game
Dedicate a song
Dedicate a song

Displaying the only video.

Displaying all 4 songs.

- Walking On Sunshine by Katrina & The Waves
- Kokomo by The Beach Boys
- Good Vibrations by The Beach Boys
- Like A Prayer by Madonna

Dedicate a song to your friends.

Figure 1-13: iLike application listed in ''canvas'' view on MySpace

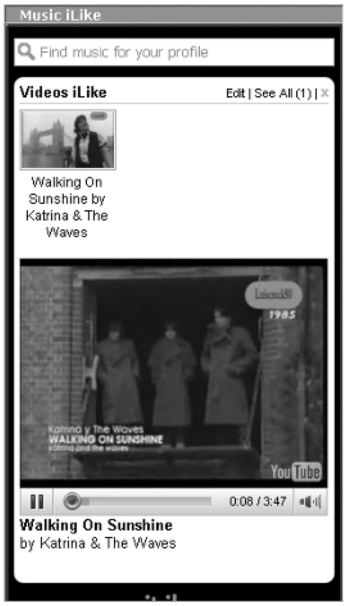


Figure 1-14: iLike application listed ''profile'' view on MySpace

OpenSocial applications can appear in three interfaces (called *views*) on a social network user’s pages, including the following:

- *‘‘Canvas’’ view* — This view is defined as a ‘‘full-screen’’ running of an application. Of course, it will be still inside of the wrapper of the social network interface, but it takes up a large percentage of the interface.
- *‘‘Home’’ view* — This view is when the application runs on the main/home interface the user sees typically when logging into the network. Most often, this will be reduced in size compared to the ‘‘canvas’’ view.
- *‘‘Profile’’view* — This is the view when the application is running on the user’s profile page. Like the ‘‘home’’ view, this is typically some smaller percentage of this page.

While these are the most common views, OpenSocial allows container’s to create container-specific views. Table 1-1 shows the size restrictions for different views for a number of the OpenSocial social networks. Exceptions and additions to these three views are noted.

Check the container’s developer documentation for possible changes in these numbers. Chapter 2 shows how to create an OpenSocial application that deploys to different views (pages).

Table 1-1: Application Size Specifications for Different Views on Different Networks

Social Network	‘‘Home’’ View	‘‘Canvas’’ View	‘‘Profile’’ View	Other
MySpace	Width = 290 pixels	Width = 960 pixels	Left-hand column: Width = 300 pixels; Height = you set*	Preview/Profile page
	Height = you set*	Height = you set*	Right-hand column: Width = 430 pixels; Height = you set*	Directory Listing
hi5	Not supported	Width = 956 pixels	Width = 456 pixels	Preview view: Width = 620 pixels
		Height = you set	Height = you set	Height = you set
orkut	Not supported	Width = 835 pixels	Width = 543 pixels	‘‘Preview’’ view: 400 pixels by 400 pixels maximum (currently uses a screen shot)
		Height = 600 pixels	Height = 280 pixels up to 500 pixels	Directory Listing

Continued

Table 1-1: Application Size Specifications for Different Views on Different Networks *(continued)*

Social Network	''Home'' View	''Canvas'' View	''Profile'' View	Other
Friendster	Not supported	Not specified; default is 500 pixels; suggested 100%	Not specified; suggested 100%	
imeem	Not supported	Width = 865 pixels	Width = 550 pixels	Preview view: Width = 635 pixels
		Height = 2000 pixels	Height = 2000 pixels	Height = 2000 pixels
Freebar	Not supported	Width = 1002 pixels	Not supported; future support.	
		Height = you set		
Netlog	Not supported	Width = 1000 pixels	Width = 490 pixels	

*Recommendations are given on the container's developer documentation.

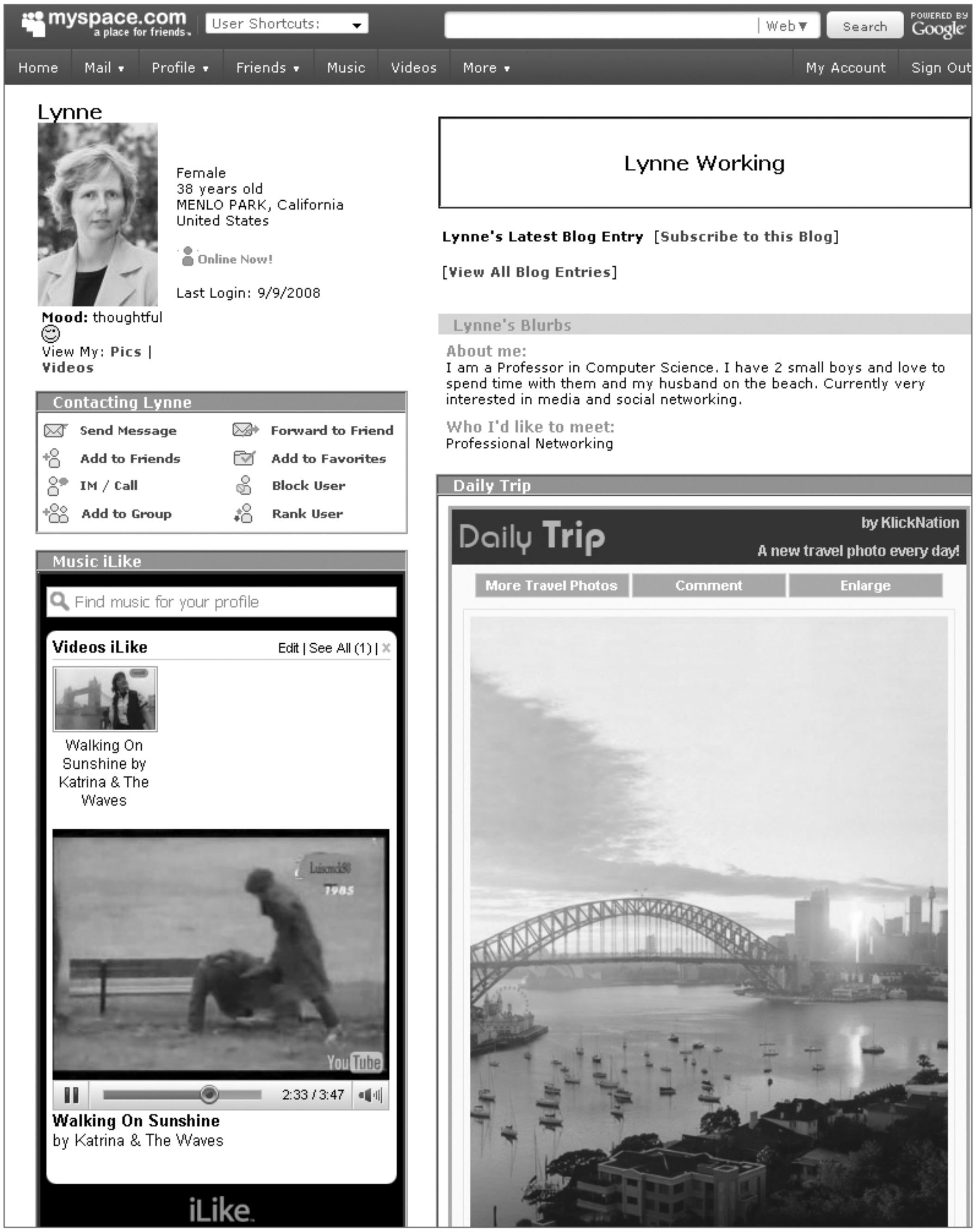
Let's take a look at a few specific networks, and how the appearance of applications is handled in each.

MySpace Application Appearance

An application appears in the different locations in MySpace user pages. When a user first logs in to the user's home page (the ''home'' view), the page displays a list of all applications. For MySpace, the application can appear directly as a ''box'' space in the user's profile, as seen with the iLike application in the lower-left of Figure 1-15. As you can see, this can take up a lot of real estate, which means that friends and others will see the application immediately when viewing this user's profile. The user typically has the capability to simply remove the application or hide it.

A user can see a brief description of your application in the MySpace directory listing. This brief description can launch to the application's profile. When you create an application on MySpace, it has its own profile associated with it. This is sometimes called the ''preview'' view in other containers. This is where a user will find out information about your application. You can customize the look of your profile, but this is what the user will see before installing your application. This application profile is where you might have user forums or reviews/comments about your application. Another item on your application's profile is ''friends lists.'' No size constraints are published on MySpace, and the profile may take up the width and remaining length of the page.

An application may run on an area of the ''home'' view called the User Home Page Module. It is located in a column and is limited to a smaller width (300 pixels, with height determined by developer, as reflected in Table 1-1). You can use this application to serve simply as a link to a ''canvas''-sized application, or you can choose to run a version in this smaller space. This space is more ''inward facing,'' meaning that it is seen only by the user. Hence, it would be ideal for applications that are more utilitarian or communications-oriented.



Lynne

Female
38 years old
MENLO PARK, California
United States

Online Now!

Last Login: 9/9/2008

Mood: thoughtful

Lynne Working

Lynne's Latest Blog Entry [Subscribe to this Blog]

[View All Blog Entries]

Lynne's Blurbs

About me:
I am a Professor in Computer Science. I have 2 small boys and love to spend time with them and my husband on the beach. Currently very interested in media and social networking.

Who I'd like to meet:
Professional Networking

Videos iLike

Walking On Sunshine by Katrina & The Waves

Walking On Sunshine
by Katrina & The Waves

Figure 1-15: The iLike music application running on the lower-left column of the user's profile

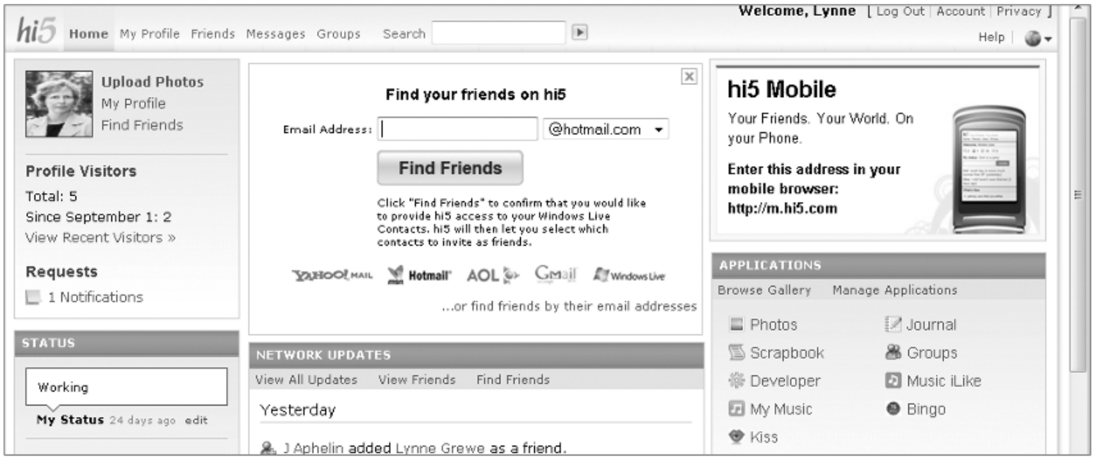
An application launched on MySpace in ‘‘canvas’’ view is given a large space (960 pixels wide, as indicated in Table 1-1). The height of an application is up to you, but MySpace recommends not going beyond the page length. In practice, many applications require users to vertically scroll (sometimes because of poor design).

In ‘‘profile’’ view, applications can appear in either the left or right column. Applications in the left column are 300 pixels wide, and in the right column are 430 pixels wide, with the height up to the developer. MySpace’s determination of which profile location (left or right) an application will appear in has changed over time.

Most applications take advantage of appearing on multiple views. This results in really long ‘‘home’’ and ‘‘profile’’ pages that can annoy users. As you add more and more applications, they may get lost in an ‘‘overlong’’ mess. Users have the option of removing applications from all or some of their pages to control this clutter. It seems there is no self-censoring when it comes to reducing the number of page views an application appears on. Recently, MySpace, orkut, and others have tested out limiting the number of applications that appear in ‘‘home’’ and ‘‘profile’’ views. For example, MySpace (for a brief time) tried limiting the number of applications listed on the ‘‘home’’ view. In some cases, these changes have been revoked, and other containers are still experimenting with this.

hi5 Application Appearance

As shown in Figure 1-16, hi5 lists currently installed applications while in ‘‘home’’ view, but the applications cannot be run from this view. hi5 only allows applications to run in ‘‘profile’’ and ‘‘canvas’’ views. As shown in Table 1-1, the ‘‘canvas’’ view is defined to be 956 pixels wide, with the height up to the discretion of the developer. The profile view has a width of 456 pixels, with the height again determined by the developer.



Total: 5
Since September 1: 2
View Recent Visitors »

Working

Email Address: | @hotmail.com

Click "Find Friends" to confirm that you would like to provide hi5 access to your Windows Live Contacts. hi5 will then let you select which contacts to invite as friends.

J Aphelin added Lynne Grewe as a friend.

Your Friends. Your World. On your Phone.

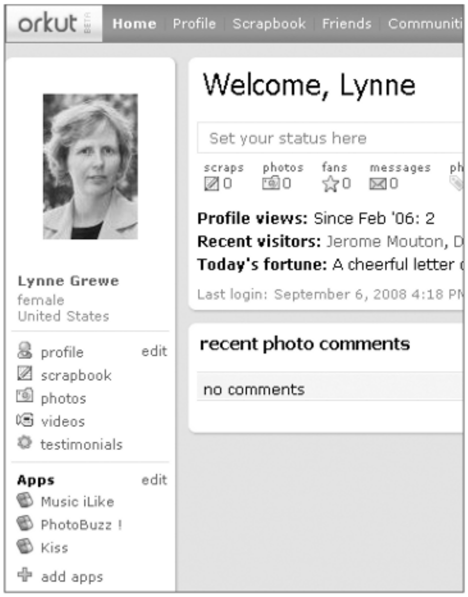
Enter this address in your mobile browser: http://m.hi5.com

Figure 1-16: hi5 Application listing only on ‘‘home’’ view

hi5 has also defined a ‘‘preview’’ view/page. Similar to the application profile page in MySpace, this is a page that allows potential users of an application to find out more about it. Included with the listing of the application on this page is a preview link that a user may click to yield the preview view. The preview page is 620 pixels wide, with the height being determined by the developer. However, it is best to stay within page length.

orkut Application Appearance

As shown in Figure 1-17, Orkut gives a list of currently installed applications when the user is in the ''home'' view. However, orkut only allows applications to run in the ''profile'' and ''canvas'' views. As shown in Table 1-1, the ''canvas'' view on orkut is defined to be 835 pixels wide by 600 pixels high (default). The profile view on orkut is 543 pixels wide by 280 pixels high (default).



Profile views: Since Feb '06: 2
Recent visitors: Jerome Mouton, D
Today's fortune: A cheerful letter
Last login: September 6, 2008 4:18 PN

Figure 1-17: orkut ''home'' view only has application listings

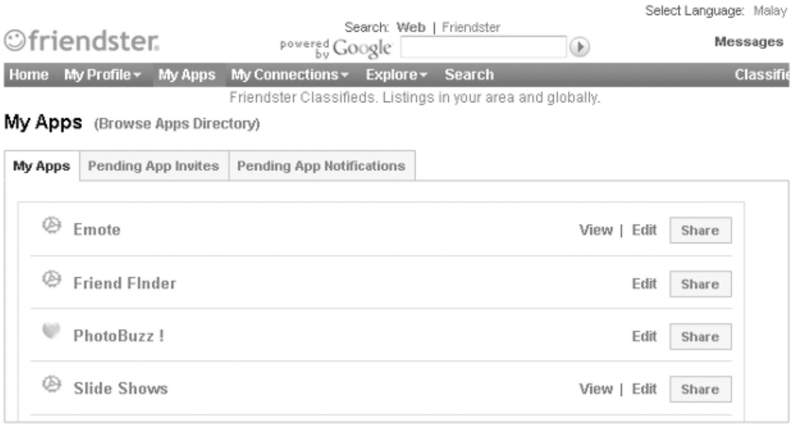
orkut's application directory provides a concise view of an application using a title, thumbnail image (120 pixels wide, 60 pixels tall) and brief text description (maximum of 300 characters). Most containers use the 120 x 60 size for thumbnail images, but a few containers vary from this (for example,. Friendster at 75 x 75 and MySpace at 64 x 64).

Similar to hi5, orkut also uses a ''preview'' view/page currently defined as a screen shot. This is a page that allows potential users of an application to click a link to find out more about application.

Friendster Application Appearance

Unlike many networks, Friendster does not provide a list of user-installed applications from the ''home'' page. Instead, the user clicks a MyApps link from the main navigation bar to be taken to the MyApps page, where the installed applications are displayed, as shown in Figure 1-18. The user may click on the name of an application appearing in this list to run the application in ''canvas'' view. Also, the user may click on the Share button to invite others to share the application, or click on the Edit button to change permissions for the application (including deleting it). Also, on this page, a user can view invitations from others to use an application, as well as track invitations that have been sent.

If the application has implemented a ''preview'' view, a View link appears on the listing page, and when clicked, will yield a short description (and logo) of the application. Friendster also allows applications to run on a user's profile. This runs in the left-hand column of the profile page (after user details).



Friendster Classifieds. Listings in your area and globally.

Figure 1-18: Friendster's MyApps page for a user

Table 1-1 provides details for size specifications in all of the various Friendster views.

imeem Application Appearance

imeem is an example of a network that has only sandbox access. This means that only developers can see and run their applications, which are not yet ''live'' for general users.

imeem currently has support to run in both the ''canvas'' and ''profile'' views. As shown in Table 1-1, the ''canvas'' view for imeem is defined to be 865 pixels wide and up to 2000 pixels high. The profile view is 550 pixels wide and up to 2000 pixels high.

imeem also supports an ''about page,'' which is similar to MySpace's application profile page or the preview pages found in other networks. This is controlled as the ''preview'' view in OpenSocial. The size of this page is 635 pixels wide and up to 2000 pixels high.

Freebar Application Appearance

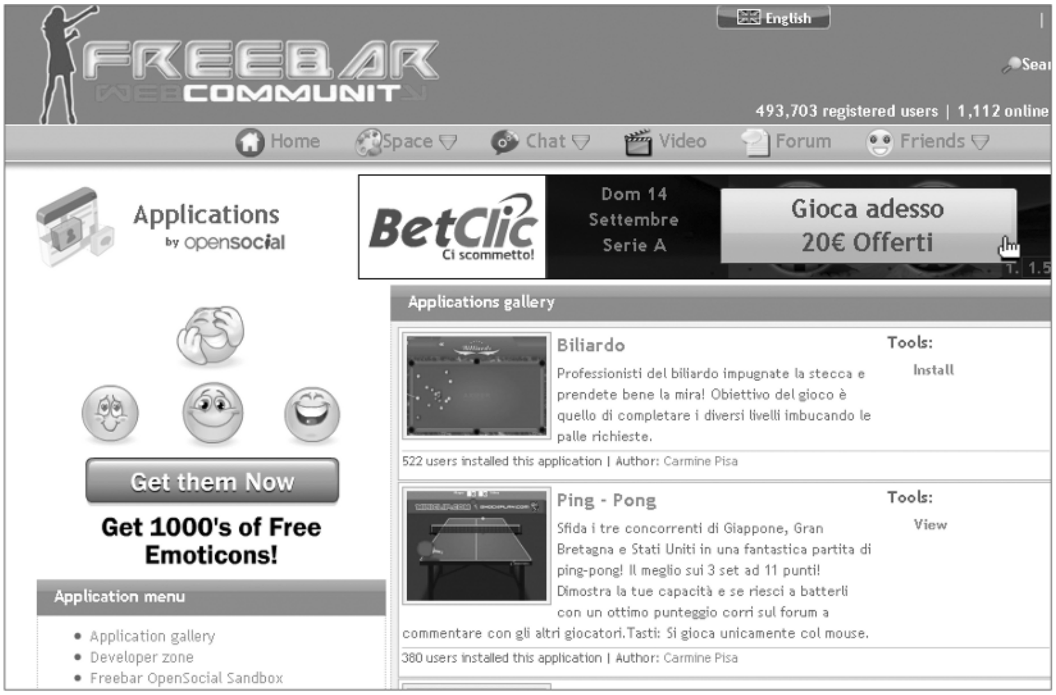
Currently, the only way to reach applications a user has installed on the Freebar network is through the ''Applications'' link under the ''Extra'' box located on a user's ''home'' page. This takes you to a page in ''canvas'' view, as shown in Figure 1-19. Since Freebar has just recently gone live with its OpenSocial support, the interface is rather simple. This page lists all applications — those that are installed and those that are not. The only way to distinguish whether an application has been installed is to look at the link next to the Application listing. If it says ''View,'' the application is installed. If it says ''Install,'' then the application obviously must be installed. Notice in Figure 1-19 that the first application, ''Billardo,'' is not installed, but the ''Ping-Pong'' application is installed. Clicking on ''View'' launches a ''canvas'' view of the Application.

Netlog Application Appearance

As of the writing of this book, Netlog, is currently in a beta version for applications. Previously, Netlog only offered sandbox support.

To reach an application listing, you must first click the Explore link from the main navigation bar, which provides you with a secondary menu under the main Explore link. From this secondary menu, you click

Applications, and the resulting screen is divided into divisions for Top and New applications. From this listing, you can select an application to install.



Biliardo

Professionisti del biliardo impugnate la stecca e prendete bene la mira! Obiettivo del gioco è quello di completare i diversi livelli imbucando le palle richieste.

522 users installed this application | Author: Carmine Pisa

Ping - Pong

Sfida i tre concorrenti di Giappone, Gran Bretagna e Stati Uniti in una fantastica partita di ping-pong! Il meglio sui 3 set ad 11 punti! Dimostra la tue capacità e se riesci a batterli con un ottimo punteggio corri sul forum a commentare con gli altri giocatori.Tasti: Si gioca unicamente col mouse.

380 users installed this application | Author: Carmine Pisa

Figure 1-19: Application listing showing both uninstalled and installed applications on Freebar

Once the application is installed, you can access it by clicking Manage from the main navigation bar, and then clicking Applications from the secondary menu. From the resulting page shown in Figure 1-20, you can elect to add the application to the user's profile.

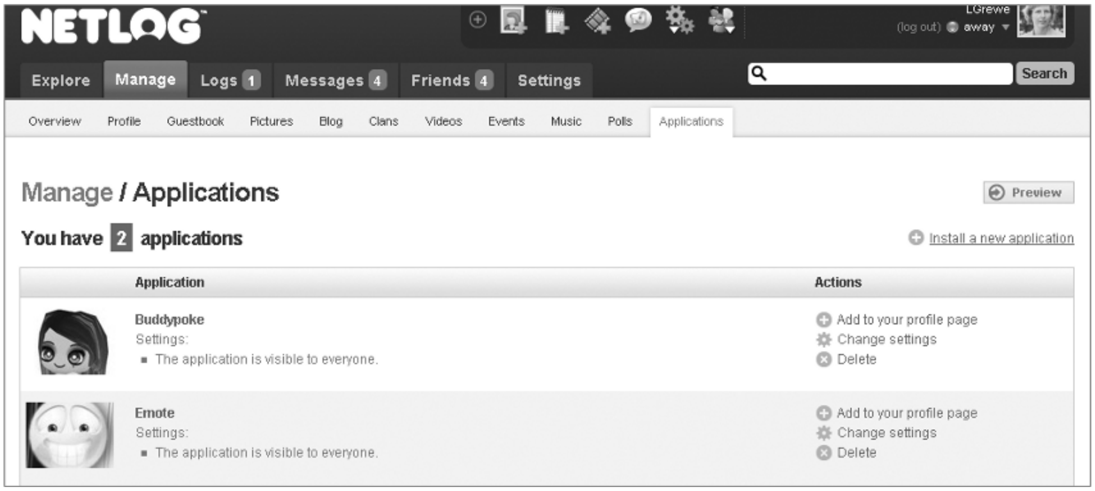
Control of Applications

In addition to the control of an application imposed by the social network, the user and the developer also exert control on an application. Each can control different aspects of an application.

Network Control

Social networks limit applications in a number of ways, including the following:

- ❑ The capability to contact users
- ❑ The capability to contact non-users
- ❑ Where an application appears in the interface
- ❑ Through a myriad of facilities effecting communications and data access



Manage / Applications

You have 2 applications

Application	Actions
Buddypoke Settings: ■ The application is visible to everyone.	Add to your profile page Change settings Delete
Emote Settings: ■ The application is visible to everyone.	Add to your profile page Change settings Delete

Figure 1-20: Netlog's user's application page

How this is accomplished is, unfortunately, not uniform, and is specific to the social network. Sometimes these services are even disabled. These controls are among the things that often change with social networks.

More specifically, the social network can control applications in the following ways:

- ❑ Controlling options through application setup
- ❑ Enforcing user-specified permission settings
- ❑ Using browsing indices and associated keyword searches
- ❑ Limiting ''canvas'' screen space
- ❑ Limiting access to user data
- ❑ Limiting (or preventing) access to non-user data
- ❑ Limiting the use of messaging, notifications, and other communication options
- ❑ Limiting the number of invitations you can send
- ❑ Enforcing the network's ''Terms of Use Policy,'' including those pertaining to language and objectionable content
- ❑ Limiting data storage (when provided)
- ❑ Limiting media access
- ❑ Limiting client-side technologies
- ❑ Implementing an approval process for application development and application content/media

Each container is different in how it controls an application. These policies are sometimes not published, and may often change. Because of this, developers must continually educate themselves on the changes in any network's application policies. For example, orkut has a limit on activity streams of one update per day, per application, per user.

The first stage of network control comes in the registration of an application. Commonly, this will include limitations on the name of the application, logo used, terms of use, information about pages, as well as the application URL configuration. Chapter 2 provides more detail for different networks.

Placement of an application in browsing indices (as well as placement in returned search results) is determined differently for each network. Each network has different browsable categories. Among the attributes that should be considered is the information given at registration time (such as the application category).

Chapter 4 discusses how different networks support and limit access to social data through the JavaScript (OpenSocial) API. Besides differences between versions of OpenSocial, the greatest difference is in the implementation of optional OpenSocial data fields.

Terms of use policies are enforced by each network. How this is done is proprietary for each network. However, there have been cases of applications being removed because of violations of these policies. Some of the container rules are motivated by applications that seemingly ''scam'' users into recommendations and other operations.

Checking the terms of use for applications is critical for any developer, and the terms are unique to the network platform. For example, the MySpace Web site provides a complete list of rules for developers that include what an application must do and what it must not do. (See `http://developer.myspace.com/community/myspace/applicationguidelines.aspx` for complete information.)

In addition to Web pages documenting current social network application policies, some social networks (including MySpace) sponsor a forum on the topic. (For a MySpace example, see `http://developer.myspace.com/Community/forums/45.aspx`.) This is a good place to post questions, or even make requests.

Typically, if an application is in violation of a social network's terms of use and guidelines for stated policies, the developer will be notified and have some time to fix the problem. Rules surrounding notification are different for each network. The social network may also, under certain conditions, impose certain sanctions on the developer and the application. Again, using MySpace as an example, specific remedies are outlined for developers to correct violations (see `http://developer.myspace.com/Community/blogs/devteam/archive/2008/08/21/when-good-apps-go-bad.aspx` for complete details.)

Limitations on all forms of communications such as messages, postings to feeds, and notifications are set for applications, and are network-specific. When this limit is exceeded, further requests are refused until the limitation (typically an elapsed time period) is no longer true. Unfortunately, these rules do change, and developer's must read the network's current policies on these issues. Each network also limits the number of invitations an application can send out per user in a fixed amount of time.

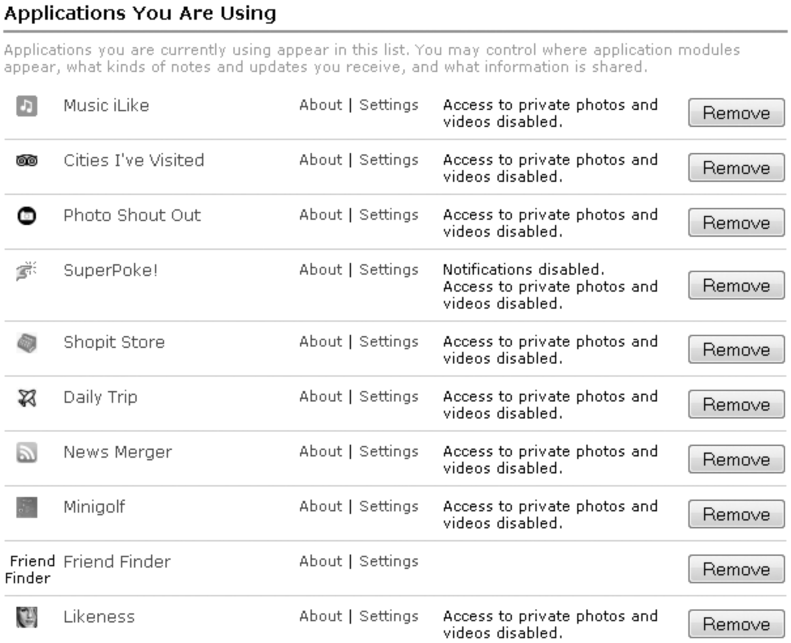
Some other forms of network limitation include if and how an application can access network media, and the amount of data storage given an application (when it exists). Additionally, there can be control on the kind of output your application is allowed to give.

User Control

A user can control applications in the following ways:

- ❑ Installation and removal
- ❑ Setting permissions at installation time
- ❑ Changing permissions
- ❑ Reporting on application

Upon installation of an application, the user may set the original permissions associated with the application. The user may also have the capability to alter these permission settings after installation, as shown in Figure 1-21. Basic user actions such as installation and removal can be tracked by your application. This is done through the recently added OpenSocial lifecycle support, which is discussed in more detail in Chapter 3.



Applications You Are Using

Applications you are currently using appear in this list. You may control where application modules appear, what kinds of notes and updates you receive, and what information is shared.

	Music iLike	About | Settings	Access to private photos and videos disabled.	Remove
	Cities I've Visited	About | Settings	Access to private photos and videos disabled.	Remove
	Photo Shout Out	About | Settings	Access to private photos and videos disabled.	Remove
	SuperPoke!	About | Settings	Notifications disabled. Access to private photos and videos disabled.	Remove
	Shopit Store	About | Settings	Access to private photos and videos disabled.	Remove
	Daily Trip	About | Settings	Access to private photos and videos disabled.	Remove
	News Merger	About | Settings	Access to private photos and videos disabled.	Remove
	Minigolf	About | Settings	Access to private photos and videos disabled.	Remove
Friend Finder	Friend Finder	About | Settings		Remove
	Likeness	About | Settings	Access to private photos and videos disabled.	Remove

Figure 1-21: A MySpace user's list of applications, where applications can be removed, and permissions changed

Users can also influence the success of an application via reporting and voting on it. A user can report an application to the network for things such as the application not working properly, infringements on conditions of use, or the use of objectionable material. Each network has policies to investigate these reports, and network responses can include removal of an application.

Developer Control

Developers control their applications simply by how they code and deploy them. It is interesting to note that through the simple act of deployment, the developer can determine how the application appears in a network, and how it is found.

Now that you are familiar with social networks (containers) and have a broad understanding of applications that can be deployed to these, let drill down a bit to see what distinguishes a good social network application from one that is not as successful.

Making Applications Social and Viral

Of primary interest to social network application developers is making an application viral and social. A *viral* application is one that is ''wildly'' popular. A distinctive feature of social network applications is that they can experience an explosive user growth rate in very short time periods. Another kind of application might take weeks and months to achieve a sizable user base, but a social application can expand its user base in a matter of days (and sometimes hours). This is exciting, but can also be challenging.

There is no uniform metric for viral growth. It is a relative concept. Regardless of the numerous formulas that ''experts'' apply, viral growth is related directly to the user growth rate. Following are some of the common metrics used in the calculation of viral growth:

- Average number of invitations a user will send out in a given time period
- Retention rate equals the percentage of users lost (application is uninstalled) in a time period
- Capacity equals the total number of potential users (with the maximum being the number of network members, or it can be less, and based on demographics)
- Invite conversion rate equals the percentage of invitees who accept

The reality is that each of these metrics is not constant, but instead each changes over the life of an application. Modeling the viral nature of your application involves tracking all of this information from the birth of the application.

Both new and experienced social network application developers must also answer the question of how to make their applications *social*. The goal is to create engaging interactions between users. Interactions may be between friends or other application users, possibly people outside of the application, or even the encompassing social network. Interactions can be specific to the function of the application. For example, in the iLike application, you get to share what you like with other friends and users.

Application Goals

The failure of application development often is the result of not defining and understanding an application's objectives. Following are good goals to consider when developing your application:

- Growth
- Engagement

- ❑ Good look and feel
- ❑ Dynamic evolution
- ❑ Self expression
- ❑ Social exposure
- ❑ Relationship building
- ❑ Real-world problem solving

Let’s take a look at each of these application objectives.

Growth

Growth is defined as building a user base. Without this, your application is dead. Having an application go viral is often a desired goal. The definition of viral growth should vary greatly by the application purpose and intended audience. Techniques to achieve this goal are a main focus of this chapter, and discussed throughout.

Engagement

Engagement is defined as the holding of attention and the participation of an application user with the application, other users (through the application), or the ‘‘brand’’ of the application. What you want is early engagement with your application. Across social networks, there is a tendency for a user to try a new application, and then quickly remove it (or no longer use it). Applications such as these obviously lack early engagement.

As an application developer, what you must focus on is how you can achieve these different aspects of engagement early — say, in a 1-minute time period. To make this time period the most effective, you might consider the following:

- ❑ Clearly demonstrate purpose of the application
- ❑ Show appropriately interesting content, tying it to friends and other related groups, if possible.
- ❑ Make the initial interface simple
- ❑ On the first interface, allow some form of ‘‘ownership’’/capability of a user to start to use the application, and customize it to his or her needs
- ❑ Highlight identity of the application through logo placement
- ❑ Pay attention to the responsiveness in the loading of the application, and in response to user interactions

The term ‘‘engagement’’ has been defined in a number of important ways, and may be achieved by the developer through many different means. Let’s take a quick look the following ways to achieve engagement:

- ❑ Distribution
- ❑ Exposure
- ❑ Attentiveness

- ❑ Communication
- ❑ Persuasion
- ❑ Response

The key to engagement is all about making it relevant to the user.

Distribution

Distribution is an aspect of engagement dealing with the loyalty a user has to an application. This can be measured by the regularity a user visits. Sometimes this is called the ''stickiness'' of an application. Measuring this is important, and there are many tools available to accomplish this, including Google and Yahoo analytics, as well as sites such as Quantcast (`www.quantcast.com`). Another way to measure loyalty is through the concept of subscriptions and renewals, which can be appropriate for some kinds of applications.

Exposure

One measure of *exposure* is through ''completion,'' meaning that a user uses an application to its ''completion.'' For example, in a gaming application, this could mean finishing a game. Other measures of exposure include how long an application is used, and if users recommend it. You should design your application for increased exposure, which can be accomplished through direction of use, incentives, and recommendation opportunities. For example, you might offer users ''virtual currency'' in your application if they recommend it to their friends. In the case of direction of use, you might again offer an incentive if users reach a level of ''play'' or ''use'' in the application.

Attentiveness

Attentiveness describes the concentration a user applies with each of his or her senses when using an application. It also relates to the quality of thought used to think about the information users are processing. A direct measure of this, also related to exposure, is how long a user uses an application. For example, one way that you could increase the attentiveness of your users would be to introduce dynamic and changing content.

Communication

Communication is a type of engagement where users are actively involved in communicating ''within'' and ''about'' the application. Communications ''within'' the application could include the sending of media/widgets to others. Communication ''about'' the application might be sending messages to friends or others about the application or the use of it. Creating a comment wall or review board are some options. Other possibilities for communication include pokes, simple gestures, instant messaging, and direct email.

Persuasion

Persuasion is really an aspect of communication whereby the user of the application is endorsing the application to friends or others. This could be accomplished directly through messages, or invitations generated from the application. Indirectly, it might be through the placement of an application on a user's profile.

Response

Response in this context indicates a direct interaction with the application. This is a measure of active use (as opposed to inactive observation) of the application. Increased response means increased exposure of an application, which introduces the important possibility of interactions.

Good Look and Feel

Look and feel describes the main appearance and interactive features in an application's interface. In social network applications, you see two basic trends with regard to look and feel: those that look like the social network interface, and those that do not.

A developer may design an application to look like a social network interface (for example, MySpace or hi5) to create consistency, potential ease of use, and perhaps greater trustworthiness (because it may appear to the user as though the social network might ''own'' this application).

The choice to use a different look from the social network creates a stronger sense of application identity. This look can be directed toward the targeted audience, and may be more appropriate for the content of the application.

Dynamic Evolution

Dynamic evolution addresses both the concept of the application experience being interactive (dynamic), as well as changing over time (evolution). Regardless of the purpose of the application, incorporating built-in ways for the user to interact is crucial for engagement. Having interchanges that are social in nature (such as involving friends) is ideal.

A static application (one that does not evolve over time) will often quickly lose its user base. The nature of the application will sometimes determine the timetable over which changes are made, as well as what changes are made. Some applications can change weekly, and, in little ways, possibly on a daily basis. Change can be a result of the changing social graph. Change can result from friends' actions, new content, or as a result of altering application functionality. This is discussed in more detail later in this chapter in the section, ''Retention.''

Self Expression

Self expression can take many forms in social networks. It can also be present in different locations (page views) on a network. For example, there is the profile page that represents each user. Also there are communications postings (for example, status lines) that serve self expression. Selection of a user's friends and a user's friend's expression can be considered part of the user's own self expression. So, applications that feature these elements allow for greater self expression in a social context.

The nature of the application (such as some of the graffiti drawing applications) allow for content development as a means of self expression. Another example is gifting in applications. Direct communication of preferences through recommendations and references are another form of self expression implemented in social applications. Some may consider self expression equivalent to a user ''showing off.'' With this definition, anything that promotes the user in a public way is desirable.

Social Exposure

A good way to make an application viral is through *social exposure*, which is the direct use of a user's personal social graph (their friends and friends' friends). For example, an application can show a user what his or her friends who are using this application have recently done, or are currently doing. This kind of social activity stream is a great driver of retention and exposure engagement within an application.

Going beyond friends and reaching further into the social graph to friends of friends can be appropriate for some applications, and can be a means of advancing both engagement and growth. Within the confines of the application, this can introduce users to new potential friends, and possibly increase interactions within the application.

Relationship Building

Besides looking at a user's own social graph, an application can try to link unrelated users by such things as common interests or usage of the application as a means to build relationships. Shared interests can come directly from user-generated data in the application, or may come from user profile data (if accessible to the application). Creating new relationships (and possibly groups and communities) will increase loyalty (that is, distribution engagement) and retention.

Real-World Problem Solving

Many of the first social network applications were fun, but were considered by many to be silly and with little purpose. One particular way of building retention in your application is to have it solve some real-world problem. There are lots of possibilities in each application domain. For example, in your application, you could include aspects of project management, event management, shopping, recommendations, education, communications, content creation and distribution, information management, and sharing.

Application Trends

The importance of current and emerging trends is that they show where current and future innovation is headed. Trends at best can reflect user desires and needs. Trends often appeal to the public. You want your application to achieve these goals. Studying trends, and picking ones that work for your application, is part of a good application-development design strategy.

This section presents some of the current and emerging social network application trends. Later in this chapter, the concept of retention is examined in more detail. While not the opposite of ''trendy,'' retention is a good (or better) goal.

A recent report by Morgan Stanley (see `http://www.socialtimes.com/2008/04/social-applications-are-the-hottest-trend` for complete details) on Internet trends compared two of the top social networks, and came to the conclusion that one was achieving a greater user growth rate because of the following attributes:

❑ Ads being less intrusive

❑ Early newsfeed use and personalization

- ❑ Simple/concise user interface
- ❑ Feature friend information
- ❑ Personalized ads
- ❑ Mobile phone capabilities

These are trends you might consider for your own social application.

Figure 1-22 shows a breakdown of the most popular application categories to date on MySpace. This was compiled by adding up the total install numbers from the top 10 applications in each of the 23 application categories on MySpace. Some major applications (mostly games) are counted in multiple categories.

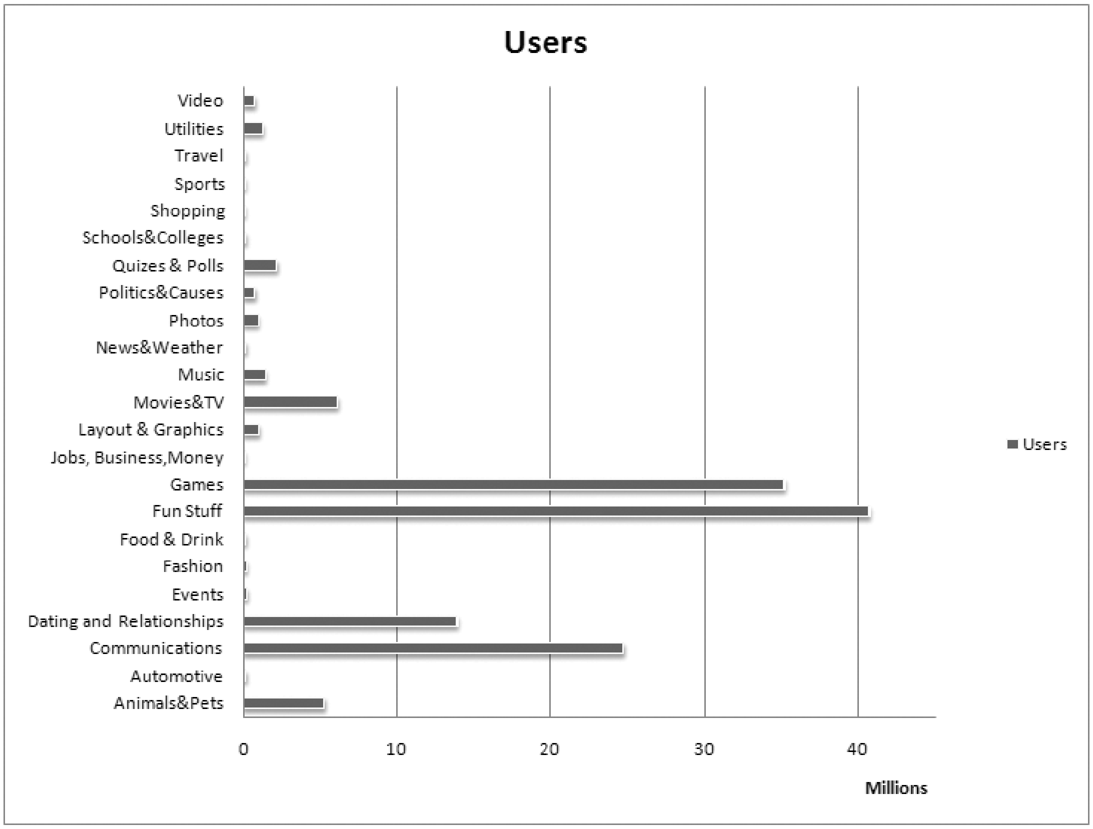


Figure 1-22: MySpace application trends (number of users by application category)

What the chart in Figure 1-22 doesn't show you is that a few applications are really dominating the numbers in the most popular categories. Figure 1-23 shows the numbers for the top 10 applications in the most popular ''Fun Stuff'' category.

While the focus of this book is on OpenSocial, because the Facebook application platform has been around longer, it is important to look at application trends on Facebook. A great site to check out is Adonomoics (`http://adonomics.com/`), which offers Facebook analytics. In particular, that site shows rankings of companies involved in application development on Facebook. Looking at the applications from some of the more successful companies can give you ideas for successful formulas.

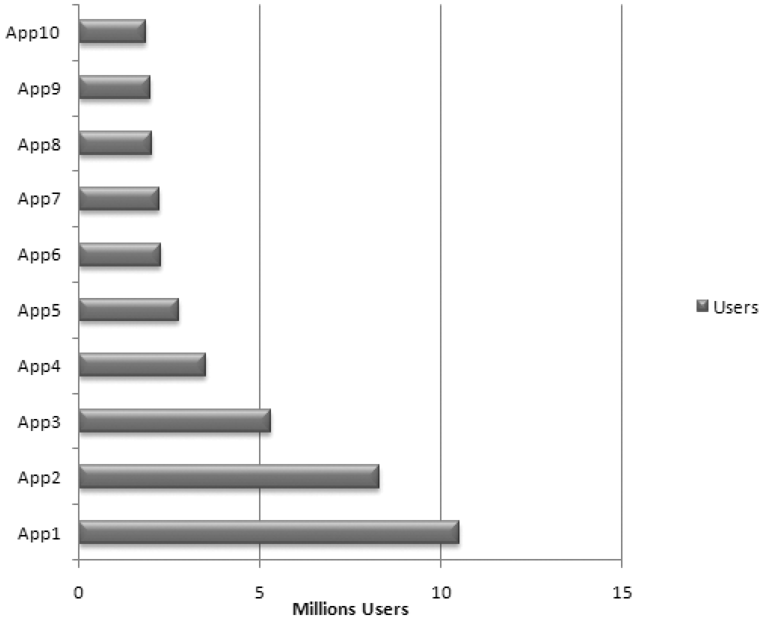


Figure 1-23: User numbers for the top 10 applications in the ‘‘Fun Stuff’’ MySpace category

There is an ongoing discussion in the developer community regarding *application purpose* — that is, creating applications ‘‘solely’’ for entertainment or creating ‘‘useful’’ applications. Many critics of the social network application business say that most (or all) of the applications produced are ‘‘silly’’ and of no purpose. It is true that there are a number of applications that can fit this mold. Also, it is true that statistics show that there is a lifetime to these (and, perhaps, all) applications. But, does this make them unviable as a business model? Some developers say ‘‘yes,’’ and others say ‘‘no.’’ What developers agree on is that an application must be engaging to users, and this is the one common trait that all applications must have.

Let’s take a look at some different trends in terms of application development. (There is no implied importance to the order in which they are examined.)

Reach (General Appeal) Applications

Some companies (in particular many with longer histories, such as application developers RockYou and Slide) have developed a number of wide-reaching, general-appeal applications. These are applications built for *reach*, which is the concept of trying to gain the most users spread across demographics and interests. Many of these applications have simple premises, and are based on simple messaging.

The advantage of these kinds of applications is that they have the largest potential market. The disadvantage is that often, in their general appeal, these applications may have a shorter lifespan because users may quickly lose interest. One argument made by developers who prefer this kind of application is that the application can be made quickly, and can quickly become viral because of ease of use.

Some of the simpler applications of this genre are often criticized as being silly. But, as pointed out in the article, ''Silly is Serious Business'' by Keith Rabois, Vice President of Strategy & Business Development at Slide (see `http://voices.allthingsd.com/20080513/silly-is-serious-business`), statistics can support ''silly'' or entertaining as good business. Rabois provides a number of examples where more entertaining media is the preference for the general audience. For example, he points out that during the recent United States Presidential campaign broadcasts, shows such as *American Idol* and *Dancing with the Stars* had the greatest audience. This definitely points to the fact that ''entertaining'' is important, but, given a choice of different forms of entertainment, would silly always rule?

Not all applications that fall into this category are simple. A good example of this are the ''profile pimping'' applications that let users develop and share graphics such as slide shows.

Vertical (Targeted) Applications

A number of developers are finding users by targeting a specific category. A couple of great examples of this are iLike (which targets music) and Flixster (which targets movies).

Watercooler describes itself as the world's largest television and sports community. It is distributed across multiple social networks (for example, MySpace, Facebook, hi5, and so on). The Watercooler applications like ''Pittsburgh Steeler Fans'' and ''Boston Red Sox Fans'' (Figure 1-24) concentrate on sports. There are also the ''Addicted to X'' applications that focus on different television shows (Figure 1-25). Much of the content in these applications is generated by the users. The application provides effective tools for the user to report on this kind of subject.

Applications in this category focus on people who have specific likes, rather than trying to build wide-reaching applications. There is a lot of potential growth in *vertical markets*, as well as some interesting associated revenue streams.

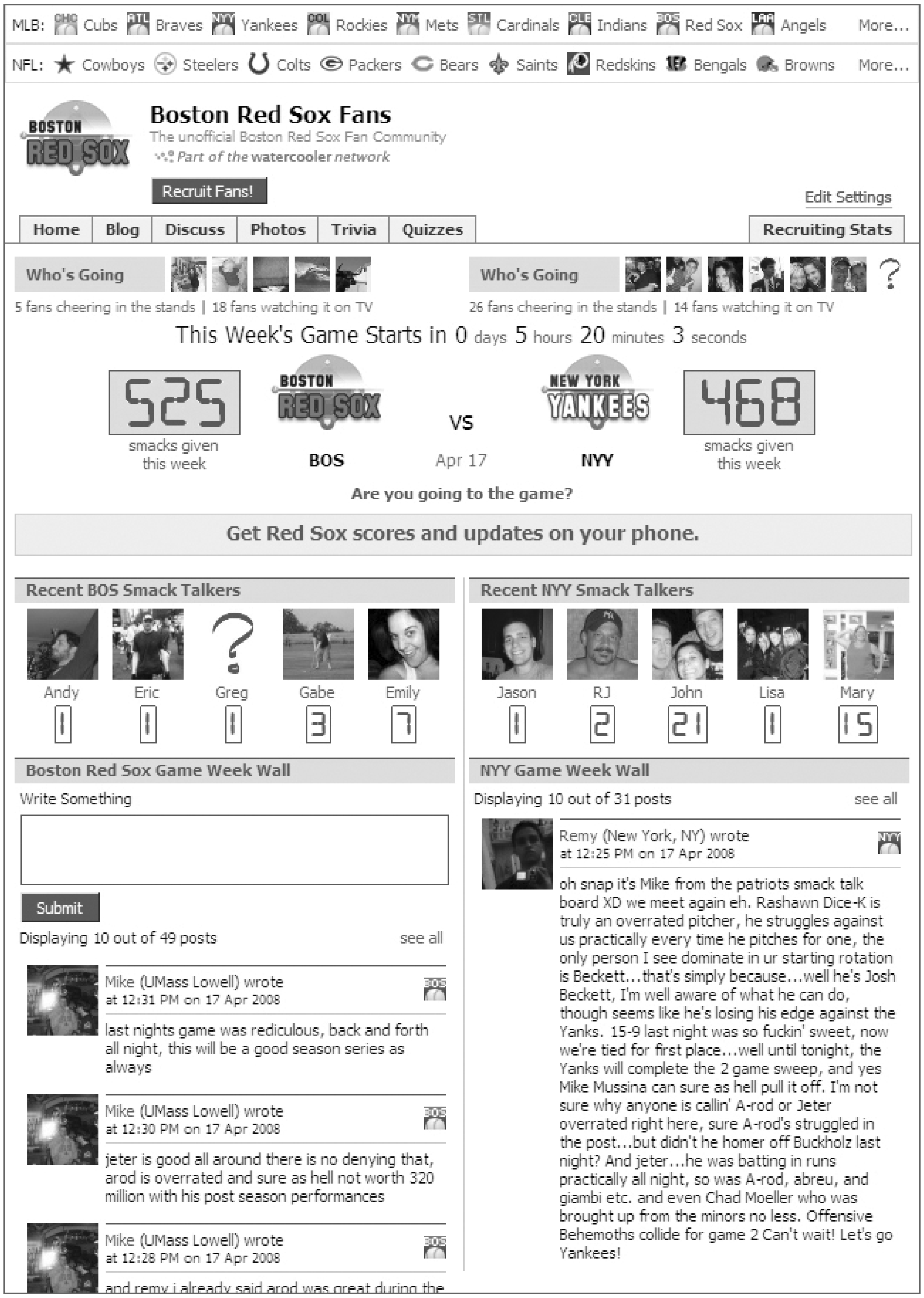
Template-Based Application Development

This paradigm of application development surrounds the idea of creating a ''template'' application that can then be used to more quickly generate a series of applications. It is based on the idea that many basic applications will have many of the same features and needs, as well as similar interfaces. Some companies have used this formula to create the simple entertainment-oriented (''silly'') applications previously mentioned. Others are using them to create applications that are for targeted (vertical) markets.

Slide is an example of a company that has been known to create a series of successful (viral) applications that have a template construction falling in the simpler entertainment category. These applications (denoted by developers as ''throw a sheep'' applications) are what the social network applications industry owes (to a great extent) its birth and boom to.

More recently, there are examples of developers creating template-based applications for vertical markets. For example, according to Adonomics.com (`http://adonomics.com`) Watercooler has produced more than 600 applications, and most of them are fan-oriented applications. A large number of these fan-oriented applications are focused on sports teams and television shows. Vikas Gupta, CEO of Watercooler, has described Watercooler as being the ''ESPN or MTV for the social network generation.''

Currently, Watercooler applications for both television shows and sporting events have set and similar formats. Translating this to the social network world can make sense for the user.


MLB: Cubs Braves Yankees Rockies Mets Cardinals Indians Red Sox Angels More...
NFL: Cowboys Steelers Colts Packers Bears Saints Redskins Bengals Browns More...
Boston Red Sox Fans
The unofficial Boston Red Sox Fan Community
Part of the watercooler network
Recruit Fans!
Edit Settings
Home
Blog
Discuss
Photos
Trivia
Quizzes
Recruiting Stats
Who's Going
5 fans cheering in the stands | 18 fans watching it on TV
Who's Going
26 fans cheering in the stands | 14 fans watching it on TV
This Week's Game Starts in 0 days 5 hours 20 minutes 3 seconds
525
smacks given this week
BOS
VS
Apr 17
NYY
468
smacks given this week
Are you going to the game?
Get Red Sox scores and updates on your phone.
Recent BOS Smack Talkers
Andy 1
Eric 1
Greg 1
Gabe 3
Emily 7
Recent NYY Smack Talkers
Jason 1
RJ 2
John 21
Lisa 1
Mary 15
Boston Red Sox Game Week Wall
Write Something
Submit
Displaying 10 out of 49 posts
see all
NYY Game Week Wall
Displaying 10 out of 31 posts
see all

Mike (UMass Lowell) wrote
at 12:31 PM on 17 Apr 2008

last nights game was rediculous, back and forth all night, this will be a good season series as always

Mike (UMass Lowell) wrote
at 12:30 PM on 17 Apr 2008

jeter is good all around there is no denying that, arod is overrated and sure as hell not worth 320 million with his post season performances

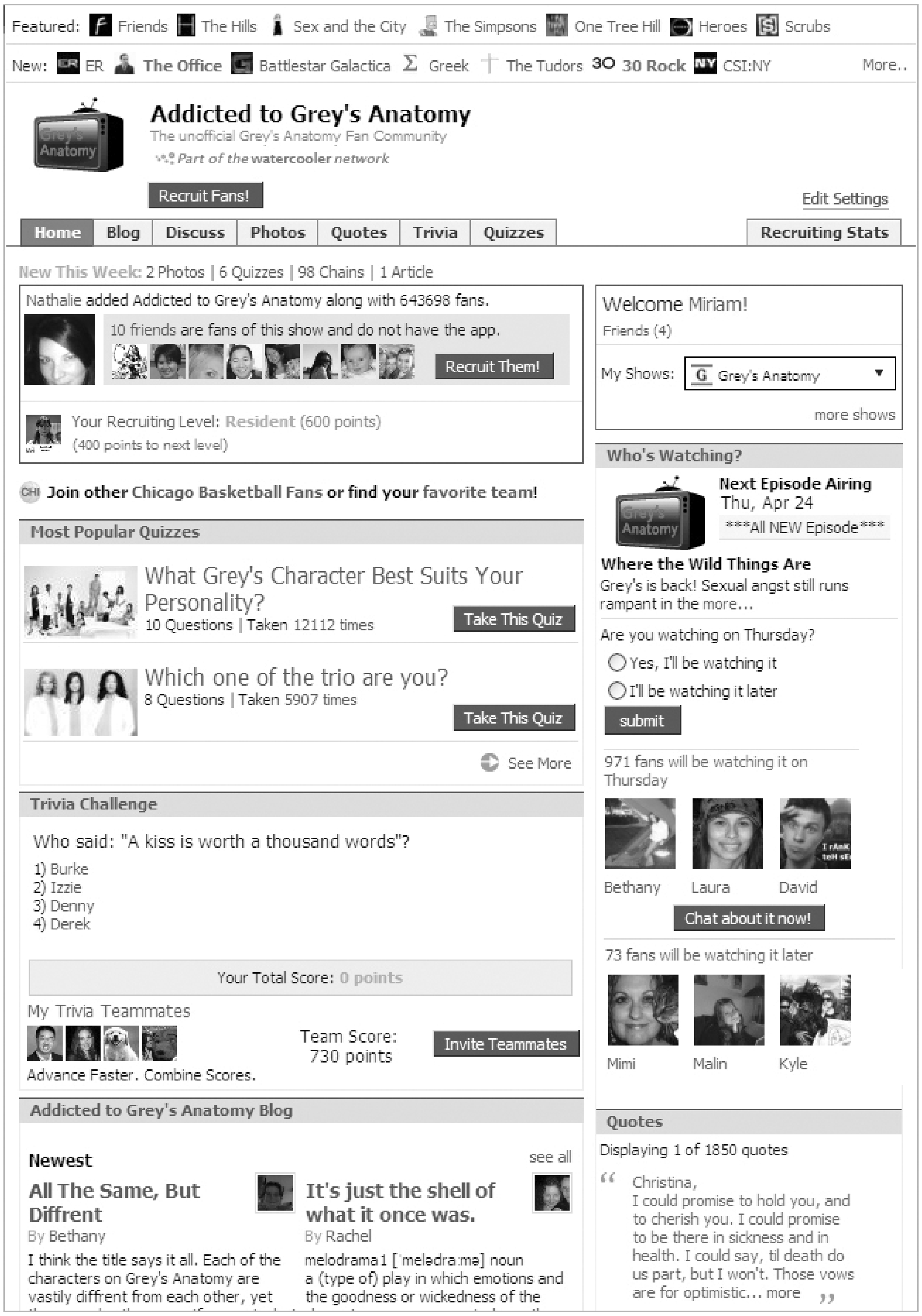
Mike (UMass Lowell) wrote
at 12:28 PM on 17 Apr 2008

and remy i already said arod was great during the

Remy (New York, NY) wrote
at 12:25 PM on 17 Apr 2008

oh snap it's Mike from the patriots smack talk board XD we meet again eh. Rashawn Dice-K is truly an overrated pitcher, he struggles against us practically every time he pitches for one, the only person I see dominate in ur starting rotation is Beckett...that's simply because...well he's Josh Beckett, I'm well aware of what he can do, though seems like he's losing his edge against the Yanks. 15-9 last night was so fuckin' sweet, now we're tied for first place...well until tonight, the Yanks will complete the 2 game sweep, and yes Mike Mussina can sure as hell pull it off. I'm not sure why anyone is callin' A-rod or Jeter overrated right here, sure A-rod's struggled in the post...but didn't he homer off Buckholz last night? And jeter...he was batting in runs practically all night, so was A-rod, abreu, and giambi etc. and even Chad Moeller who was brought up from the minors no less. Offensive Behemoths collide for game 2 Can't wait! Let's go Yankees!

Figure 1-24: Watercooler's Boston Red Sox ''fan'' application



Addicted to Grey's Anatomy

The unofficial Grey's Anatomy Fan Community

Part of the watercooler network

New This Week: 2 Photos | 6 Quizzes | 98 Chains | 1 Article

Nathalie added Addicted to Grey's Anatomy along with 643698 fans.

10 friends are fans of this show and do not have the app.

Your Recruiting Level: Resident (600 points)
(400 points to next level)

Welcome Miriam!

Friends (4)

My Shows: Grey's Anatomy ▼

more shows

Join other Chicago Basketball Fans or find your favorite team!

Most Popular Quizzes

What Grey's Character Best Suits Your Personality?
10 Questions | Taken 12112 times

Which one of the trio are you?
8 Questions | Taken 5907 times

Trivia Challenge

Who said: "A kiss is worth a thousand words"?

1) Burke
2) Izzie
3) Denny
4) Derek

Your Total Score: 0 points

My Trivia Teammates

Team Score:
730 points

Advance Faster. Combine Scores.

Who's Watching?

Next Episode Airing
Thu, Apr 24
All NEW Episode

Where the Wild Things Are

Grey's is back! Sexual angst still runs rampant in the more...

Are you watching on Thursday?

○ Yes, I'll be watching it
○ I'll be watching it later

971 fans will be watching it on Thursday

Bethany Laura David

73 fans will be watching it later

Mimi Malin Kyle

Addicted to Grey's Anatomy Blog

Newest

All The Same, But Diffrent
By Bethany
I think the title says it all. Each of the characters on Grey's Anatomy are vastily diffrent from each other, yet

It's just the shell of what it once was.
By Rachel
melodrama1 [ˈmelədraːmə] noun
a (type of) play in which emotions and the goodness or wickedness of the

Quotes

Displaying 1 of 1850 quotes

“ Christina,
I could promise to hold you, and to cherish you. I could promise to be there in sickness and in health. I could say, til death do us part, but I won't. Those vows are for optimistic... more ”

Figure 1-25: Watercooler's *Grey's Anatomy* TV Show ‘‘fan’’ application

Brand Applications

There are two definitions of *brand*-based applications. The first is to take an already existing brand and create an application around it. The application can be used to direct traffic to an external Web site, or used to create an awareness/advertisement vehicle. A number of applications (such as ‘‘Local Picks’’ by TripAdvisor) fit this description.

Developers must be careful not to abuse any of the trademark or intellectual property rules governing the use of brands. Developing a brand-based application should only be done in agreement with the company that owns the brand.

To understand the consequences of not following this tenet, you need to look no further than the famous lawsuit filed by Hasbro, Inc., over the Facebook application called ‘‘Scrabulous.’’ This application was based on Hasbro’s ‘‘Scrabble’’ game. As a consequence of the lawsuit, this application (much to the dismay of users) is currently no longer available, although there is an associated Web site. The final outcome of this lawsuit is still pending. This should serve as a warning regarding use of brands in an unauthorized fashion. Many believe Hasbro (which eventually developed its own application) should have purchased the ‘‘Scrabulous’’ application.

The second kind of ‘‘brand-based’’ application is discussed next as ‘‘destination’’ applications.

Destination Applications

Related to the concept of ‘‘branding’’ is what is referred to as the *destination* application. This kind of application goes beyond the simple use of a developer brand name (that is, a developer name/company such as RockYou or Slide). Instead, the application itself serves as a brand, and is a ‘‘destination,’’ meaning that it has a higher-level of interactivity and resident features. Destination applications may have greater user response, retention, and longer life spans than the simpler ‘‘entertainment’’ applications. But, on the whole, whether they will be more viral remains to be seen.

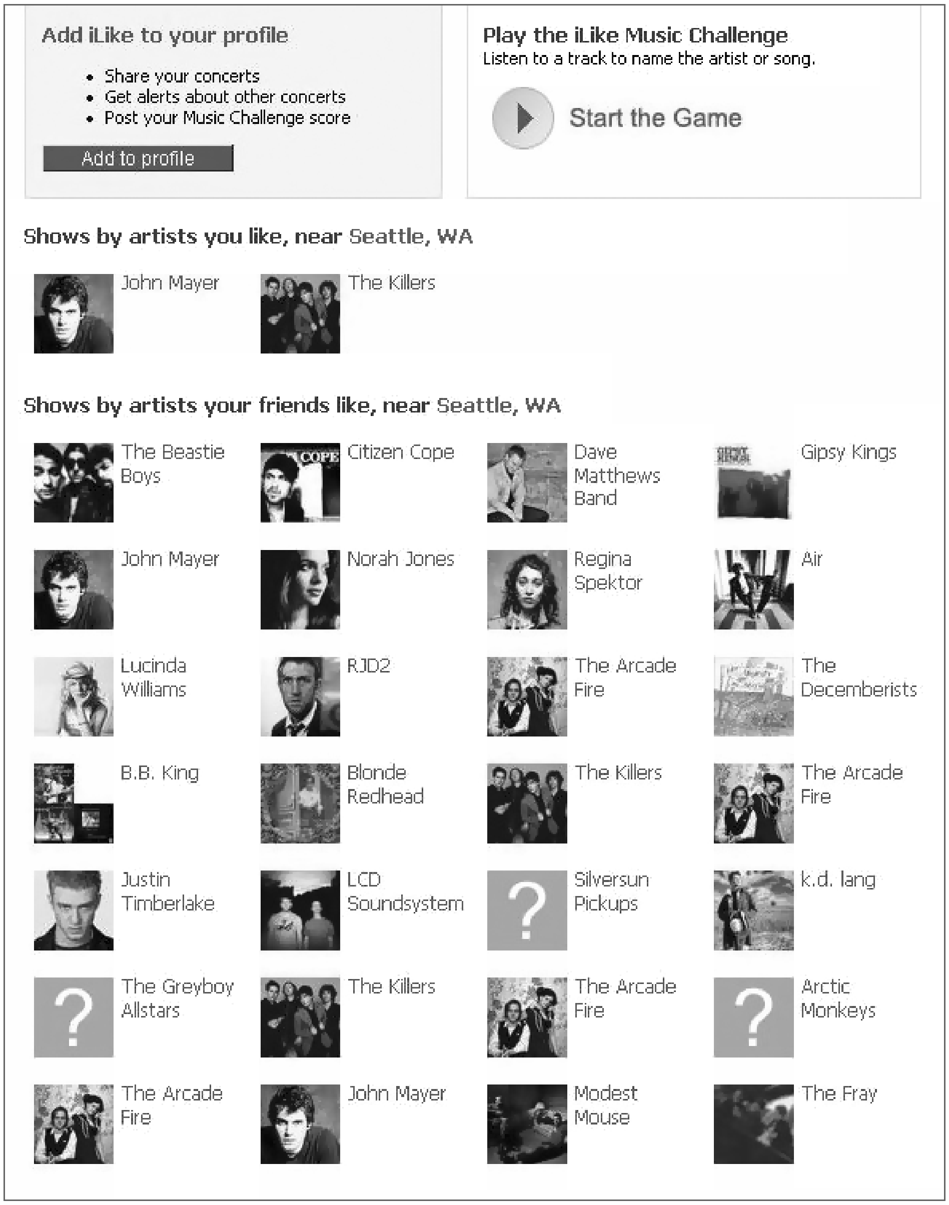
iLike is an example of this kind of application. The name of the application, the company, and the supporting Web site are all called iLike. The name is self-descriptive, and has become a brand for sharing with friends and other users media that a user likes.

Longer Engagement

To achieve longer periods of user engagement, applications typically provide real services to users — they solve real-world problems. A number of emerging examples come to mind. The previously mentioned iLike is one. The ‘‘real’’ service provided by iLike is the discovery, sharing, and purchase of music. iLike has gone through a number of iterations (something discussed later in this chapter in the section, ‘‘Retention’’). The current version of iLike is much more engaging than the initial version in terms of user attentiveness and user response. Figure 1-26 shows the 2007 version of iLike, and Figure 1-27 shows the current version of iLike.

Use of Media

The use of media can be a smart idea that can attract and keep users, or, when done poorly (such as when producing long load times), kill your application. MySpace is experiencing significant growth in its media-related utilities, and ranked with YouTube, Live.com, and Facebook as a leader in the volume of videos viewed (see http://www.socialtimes.com/2008/04/social-applications-are-the-hottest-trend). This could imply that applications featuring graphics, video, and other media will be popular (at least on MySpace).



Add iLike to your profile

- Share your concerts
- Get alerts about other concerts
- Post your Music Challenge score

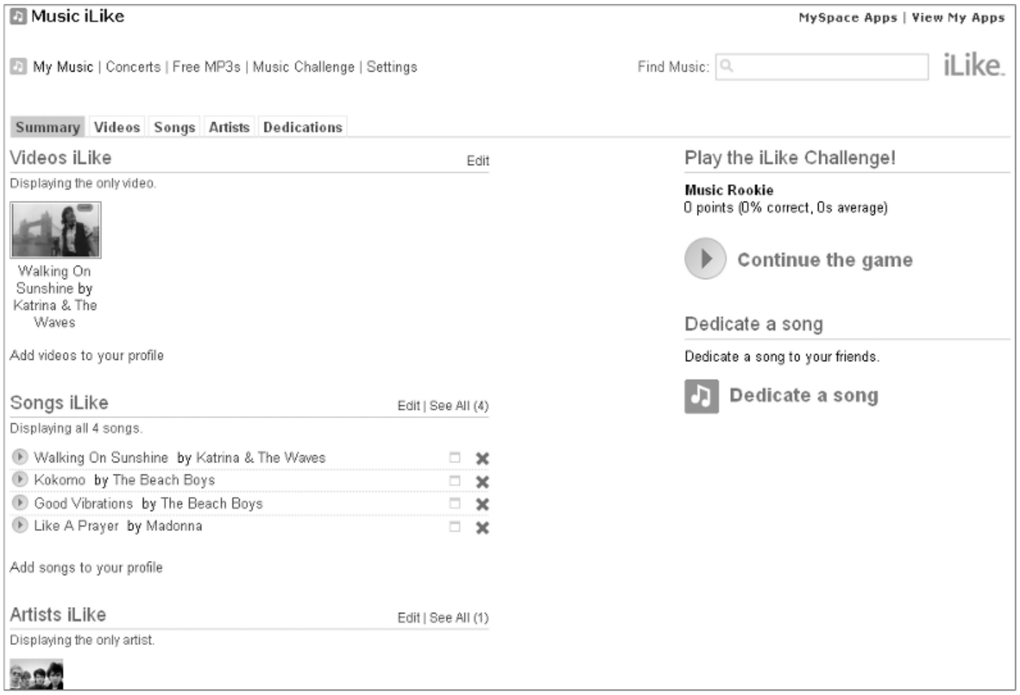
Play the iLike Music Challenge

Listen to a track to name the artist or song.

Shows by artists you like, near Seattle, WA

Shows by artists your friends like, near Seattle, WA

Figure 1-26: Initial/launch version of iLike



Videos iLike

Displaying the only video.

Walking On Sunshine by Katrina & The Waves

Add videos to your profile

Songs iLike

Displaying all 4 songs.

- Walking On Sunshine by Katrina & The Waves
- Kokomo by The Beach Boys
- Good Vibrations by The Beach Boys
- Like A Prayer by Madonna

Add songs to your profile

Artists iLike

Displaying the only artist.

Play the iLike Challenge!

Music Rookie
0 points (0% correct, 0s average)

Dedicate a song

Dedicate a song to your friends.

Figure 1-27: Current version of iLike with many more features, including navigation bars

A certain percentage of these types of applications are based on Flash, and many of these use ActionScript (a Flash programming language) for interactive capabilities. This is a popular way to bring higher-end game-like graphics interactions into an application. Most browsers already have installed the plug-in for Flash and, if not, it is readily available. Many of the issues with compression and faster load and run-times that you encounter with heavy graphics applications are handled well by the Flash player.

The ''Maffia new'' application by I-Jet is an example of combining media, storytelling, role playing, and gaming. This application is Flash-based and provides more realistic graphics, as shown in Figure 1-28. In the ''Maffia new'' application, the user becomes part of a clan. The role-playing in these kinds of games is addictive to users, and the applications experience a high user attentiveness and response.

Internationalization

The Morgan Stanley report mentioned previously (`http://www.socialtimes.com/2008/04/social-applications-are-the-hottest-trend`) discusses trends in international markets. According to this report, in the list of top ten technology, media, and telecom user countries, the United States and China are now tied for the top slot. New additions to the list include India, Brazil, and Russia. Japan, Germany, France, and Italy also are part of the top ten. This report also shows the largest growth rate for Internet use coming from China, India, Russia, Brazil, and Asian/Pacific countries, followed by other European and Latin American countries. While the U.S. still has the largest user base, it has one of the smaller growth rates. *Internationalization* is about expanding your application into these emerging (and fast-growing) markets.

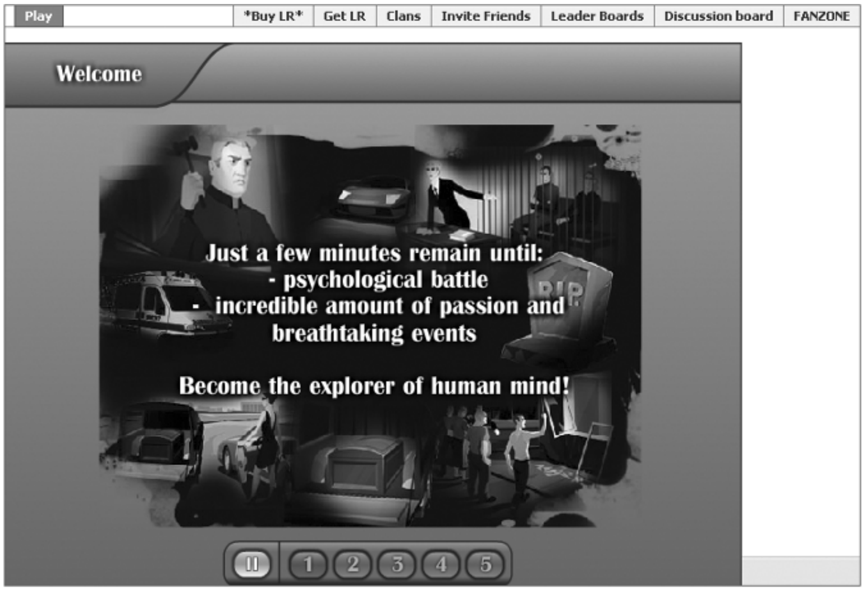


Figure 1-28: ''Maffia new'' application features role-playing and gaming

If you are considering mobile applications, China occupies the top slot, followed by the United States, in mobile phone subscriptions. The list of top countries also includes Russia, India, Brazil, and Japan, ahead of the top European countries of Germany, Italy, and the United Kingdom. Indonesia, Mexico, and Turkey rank ahead of France and Spain in number of mobile users.

These statistics might give you an idea why the internationalization of your applications could be a smart idea, and could make your application viral by spreading its popularity across international networks. Unlike the Facebook API, OpenSocial can provide the capability to create applications on different containers that have large audiences in (and identify with) these countries.

Following are some tips that might guide you in your application development strategy:

- ❑ To capture local markets, have different applications that are language-specific (and maybe functionally specific)
- ❑ Keep smaller markets in English

KlickNation's ''Kiss'' application has been developed for both the English-speaking and Spanish-speaking markets. A part of KlickNation's strategy is to reach out to networks that have strong representation in other countries. As KlickNation's first viral applications, ''Kiss'' experienced its initial success on the hi5 network, which has a strong presence in Spanish-speaking Latin America. According to VP of Business Development Ken Walton, KlickNation is looking to become ''the developer of applications in OpenSocial like Slide/Rock You is on Facebook.'' KlickNation developed its Spanish version of ''Kiss'' using OpenSocial message bundling, its own knowledge of Spanish, and Google translation services.

Self Expression

A popular feature of many applications is the exploitation of *self expression*, which basically means that the application has a strong sense of representing the user. This can be ''showing off'' or ''looking good'' to fellow friends, or it can have a deeper meaning of ''representing me.''

RockYou has a number of applications that heavily feature self expression. For example, users of RockYou's ''SlideShows'' application can create slideshows for friends and others to view. Initially, the application will load any pictures you have in your portfolio that you have uploaded to your social network account. This slide show will appear on your profile, ''dressing up'' the user's profile for others to see. RockYou's ''GlitterText'' application is another application that adds a ''show off'' element to a user's profile.

Partnering

Partnering is a primarily about business relationships and leverage. The idea here is that an application will partner with a non-social application or business to achieve more functionality or services, or provide a branding experience. A good example of this is the iLike application. iLike has partnered with both iTunes and Rhapsody. With iTunes, users are able to purchase individual songs. iLike has partnered with Rhapsody to provide iLike application users with the capability to subscribe to music. An initial number of downloads (25) will be free and, after that, the user can subscribe to the Rhapsody service. This provides a monetary stream for iLike, as well as content and more services for its users. This is a win-win situation.

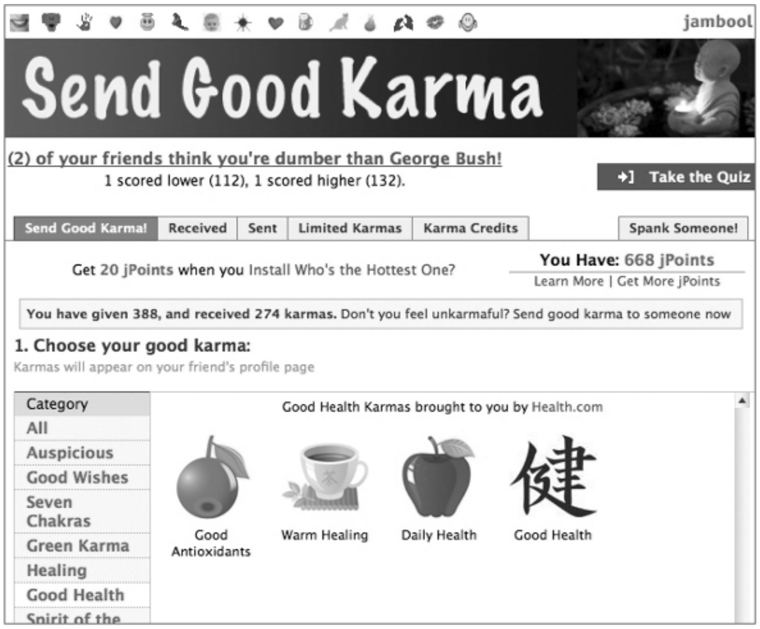
Often, the partnering can be less direct, and can be for marketing rather than sales. For example, Jambool (an application development company) teamed up with Health.com and created the ''Send Good Karma'' application (Figure 1-29). The application allows users to send ''happiness,'' ''good health,'' and other ''good karma'' wishes. If users want to send some special ''health'' karma, they are directed to become a member of Health.com first.

Watercooler has partnered with some of the large television networks such as ABC, NBC, and CBS in the creation of its ''Addicted to TV_X'' applications. Watercooler is sometimes even able to offer its users full-length episodes of the television show. Watercooler is paid by the television networks to offer this service.

Virtual Currencies, Goods, and Points

Another trend is that of *virtual currencies, goods, and points*. This capability in applications has led to increasingly viral growth rates. More importantly, it seems there may be a trend for these applications to have higher percentages of active daily users.

Applications such as ''Friends for Sale'' and ''Owned'' feature this capability. Users have described the feature as ''addictive.'' The drive to perform some operation to get virtual currencies, goods, or points that then enable a user do more in an application seems to be a successful pattern for extended use.



(2) of your friends think you're dumber than George Bush!
1 scored lower (112), 1 scored higher (132).

Get 20 jPoints when you Install Who's the Hottest One?

You Have: 668 jPoints
Learn More | Get More jPoints

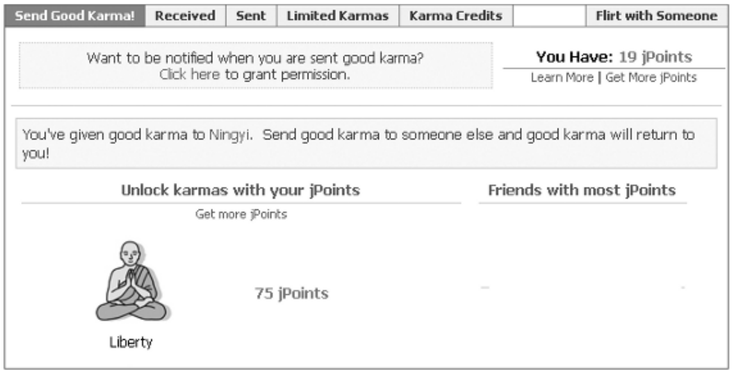
You have given 388, and received 274 karmas. Don't you feel unkarmaful? Send good karma to someone now

1. Choose your good karma:
Karmas will appear on your friend's profile page

Good Health Karmas brought to you by Health.com

Figure 1-29: ''Send Good Karma'' application by Jambool partnered with Health.com

The ''Send Good Karma'' application described previously uses this feature in what are called ''jPoints,'' as shown in Figure 1-30. The application developer, Jambool, also does cross-marketing with other applications it owns by advertising them as applications that use the same virtual point system.



Want to be notified when you are sent good karma?
Click here to grant permission.

You Have: 19 jPoints
Learn More | Get More jPoints

You've given good karma to Ningyi. Send good karma to someone else and good karma will return to you!

Unlock karmas with your jPoints
Get more jPoints

75 jPoints

Friends with most jPoints

Figure 1-30: The ''Send Good Karma'' application uses virtual points called jPoints

Virtual goods can be important to an application in a number of ways, including revenue streams, user response, and viral growth rates. Here are some examples:

- ❑ Alexey Kostarev, head producer at I-Jet and producer of the ''New Maffia'' application, says 80 percent of his company's revenue stream comes from virtual gifting.
- ❑ Facebook (the longest-running container offering ''virtual gifting'') has been reported to generate more than $35 million annually from the gifting feature (see `http://facereviews.com/2008/09/02/facebook-virtual-gifts-make-big-bucks`)

Virtual gifting has been a popular trend for some applications. The applications charge small amounts of money (called *micro-transactions*) for these virtual gifts that users can send friends. Why do people do this? A common response from developers has been that people don't mind spending small amounts of real money to make their friends feel good. Even though the gift is not real, the thought is, and the recipient might value it more knowing that the giver spent real money on it.

Mobile Applications

One of the biggest possible future trends will be penetration into the mobile world. Recently, MySpace announced that it was partnering with Research in Motion (RIM) to develop an integrated MySpace Mobile experience customized for RIM's BlackBerry smartphones. The new ''MySpace for BlackBerry'' application will be fully optimized to deliver rich content and data to users on the go. Similar agreements are being made with Apple's iPhone. This may signal a future for mobile social network applications.

Increased Use of Social Data

It is only natural that, as applications on social networks evolve, they will begin to use social data in more elaborate and unique ways. A number of developers are currently experimenting with this to evolve their applications.

Besides the traditional ''see what my friend X is doing'' functionality, applications could leverage profile/person data about its users. For example, you could use the data to recommend new applications that users might like, based on where they live, or on their interests.

Following are some ideas on how to use social data:

- ❑ Recommendation for new applications that match a user's interests or location
- ❑ Based on a user's demographics, suggest new friends using application
- ❑ Feature certain content based on user data
- ❑ If you serve your own advertising, do so based on user data or application use
- ❑ Offer features in the application based on user demographics or use

Many of these ideas are not trivial, and represent ongoing areas of research in computer science. They often involve techniques used in such areas as pattern recognition and artificial intelligence.

For example, Watercooler uses cross-application marketing by making recommendations about new applications by retrieving favorite television show information stored in a user's profile, which is a common source of user data on many social networks.

Increased Use of Application Data

In the context of this discussion, the term *application data* here is user-generated content and data inside of the application. Some applications store very little application data. However, a recent trend has been to allow users to create lots of data, and for the application to store (and then share) this data on return visits to the application. Also, applications share this information among users. Of course, the kind of data you capture will be specific to your application.

Viral Channels and Features

When developers refer to *viral channels*, they are talking about using the ''social hooks'' that each container offers its applications. Many of these channels are the same across social networks. However, there are some that are unique, and it is important to remember that networks regulate these channels differently.

There is the perception that, as the number of applications increases, the usefulness of these social hooks is waning. An advantage for the OpenSocial developer is that, because it is a new platform with new social networks signing on, the usefulness of social hooks is greater.

Some social hooks you may consider include the following:

- ❑ Profile View
- ❑ Feeds (news)
- ❑ Messaging
- ❑ Requests/Notifications
- ❑ Invitations (encourage more than 1 friend)
- ❑ Profile Data Access
    - ❑ Name
    - ❑ Age
    - ❑ Gender
    - ❑ Interests
    - ❑ Location
    - ❑ Work
    - ❑ Education
    - ❑ TV, Movies, Music, Books, Video, Images
    - ❑ Status
    - ❑ Languages

    - ❑ Marital Status, Looking For, Sexual Orientation
    - ❑ Children
    - ❑ Body Type
    - ❑ Smoker, Drinker
    - ❑ Occupation, Income
    - ❑ Religion
    - ❑ Ethnicity
    - ❑ Web sites
    - ❑ Public/private profiles? (public link to Web site from LinkedIn)

- ❑ Photo Albums
- ❑ Music, Video
- ❑ Friends Access
- ❑ Group Access
- ❑ Scrapbook
- ❑ Journal

Interviews with a number of developers regarding how to make an application viral have revealed the following interesting tips to consider:

- ❑ Containers that allow users to send friends a lot of messages from applications tend to have more viral applications.
- ❑ Containers that allow friends to send a lot of messages from applications can lead to the perception of ‘‘spamming’’ and potentially be viewed as a turn-off.
- ❑ Use of social hooks is important, but the inherent application features and engagement are more important.
- ❑ Networks with tight social networks (meaning people don’t have lots of remotely related friends) lead to better-quality friends and better longevity for applications.
- ❑ Networks with loose social networks can create viral applications more quickly.
- ❑ Networks with less services will allow this functionality to be represented by applications, and applications can grow more quickly.
- ❑ Networks with more services make it more difficult to create a viral application.
- ❑ Networks with many applications make it more difficult to create viral applications (or even find them).
- ❑ Require users to invite a number of people (for example, 10) before they can use or view some feature of the application.
- ❑ Give the user multiple opportunities to invite others. (You could even do this on every page view, but in different ways, with different incentives.)
- ❑ Specific invite messages and specific notifications give better results than general messages.

- ❑ Use address book importers to invite friends and friend selectors. Select all the friends, and make it easy (for example, have a link ''invite 15 friends,'' so that user only must click the link).
- ❑ Feature user-generated content and sharing.

In addition to these viral channels, some social features can help make your application viral. Some of these will be specific to the purpose of your application. There are some that can be used in many applications, including the following:

- ❑ My content (user can see his or her content)
- ❑ Friends content
- ❑ Quizzes
- ❑ Posts/bulletin boards
- ❑ Voting and Most Popular (on user-developed content)
- ❑ Trivia games
- ❑ Dedicate X (dedicate something to a friend)
- ❑ Virtual gifting
- ❑ Buy virtual goods/currency
- ❑ Blogs
- ❑ Joining group of users within of application users

Social Network Identity

Understanding the identity of a social network is important. It allows you to make decisions about what applications would be popular. There are many ways to classify a network. The demographics of its audience is one. You can find some statistics offered by the social networks themselves.

There are numerous third-party organizations such as ComScore, Compete, and Alexa, that can give you network statistics. Alexa (`www.alexa.com`) recently published statistics regarding traffic on MySpace, broken down by domain as follows:

- ❑ `viewmorepics.myspace.com`: 28%
- ❑ `profile.myspace.com`: 18%
- ❑ `messaging.myspace.com`: 17%
- ❑ `home.myspace.com`: 7%
- ❑ `comment.myspace.com`: 5%
- ❑ `myspace.com`: 5%
- ❑ `friends.myspace.com`: 5%
- ❑ `bulletins.myspace.com`: 4%
- ❑ `collect.myspace.com`: 2%
- ❑ `profileedit.myspace.com`: 1%

- `vids.myspace.com`: 1%
- `blog.myspace.com`: 1%
- `editprofile.myspace.com`: 1%
- `browseusers.myspace.com`: 1%
- `searchservice.myspace.com`: 1%
- Other Web sites: 3%

(See Alexa for recent changes to these figures.)

These numbers might suggest that applications dealing with pictures, profiles, and messaging would be very successful.

There are research organizations that conduct studies to track and predict information about a social network's identity. One way to measure this identity is by its perception. These kinds of metrics should be carefully considered, since they can give you (as an application developer) some possible directions. Figure 1-31 shows a graphic produced from a study by Faber Novel (`http://fabernovel.com`) that looks at a few social Web sites (including MySpace, LinkedIn, and Facebook). As you can see, the graphic places the sites on a scale of ''user identity'' (from ''fantasized'' to ''real'') and on the scale of ''user exposure'' (from ''public exposition'' to ''qualitative contents'').

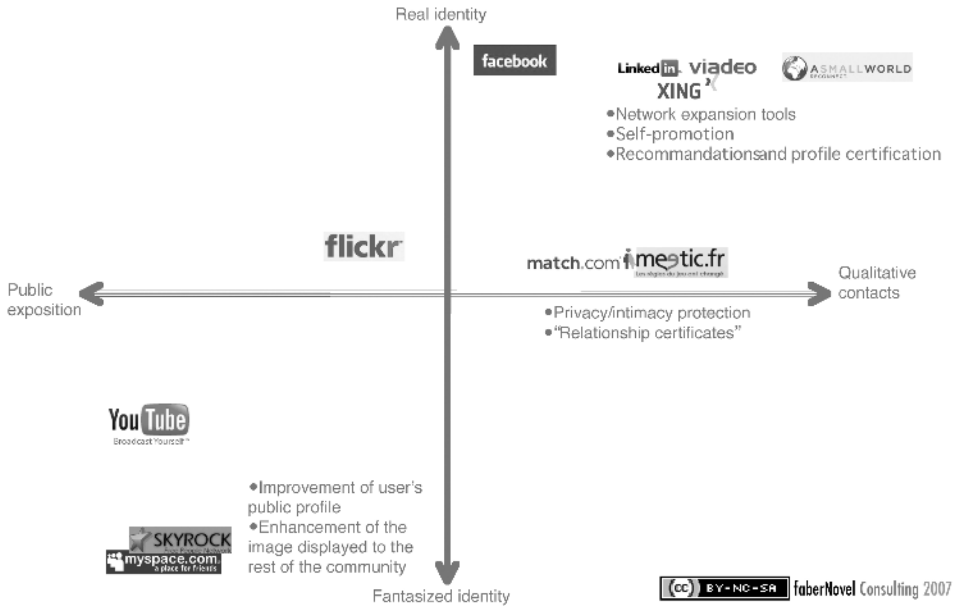


Figure 1-31: Research looks at comparing some Social Sites based on user identity and exposure

Figure 1-31 suggests that MySpace (in terms of ''user-exposure'') has a larger public audience, and (in terms of ''user-identity'') is more fantasy-oriented when compared to the the LinkedIn network. LinkedIn is placed on the opposite side of the chart, with a ''user-exposure'' of a smaller audience, but with a ''user-identity'' representing more real and qualitative contacts. Most people would probably agree with this assessment. This could mean that applications that are fantasy-based would be more successful on MySpace than on LinkedIn.

Another consideration in defining the identity of a network is the applications currently on the network themselves. Let's look at some quick statistics concerning applications and a few social networks:

- MySpace:
    - More than 50 million application installs, with more than 20 million users
    - More than 30 percent growth across all metrics (according to MySpace, without clarification of ''metrics'')
    - More than 2,500 applications
- hi5:
    - More than 66 million application installs
    - More than 68 percent of users use applications
    - More than 1,800 applications
- Friendster:
    - More than 12 million users adding applications
    - 500,000 application installs each day
    - More than 500 applications certified
    - More than 2,000 developers

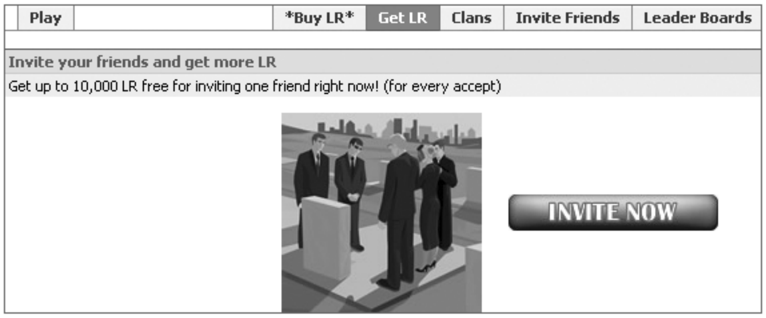
Marketing — The Next Step

One way to feed a growing application is through effective marketing. Marketing can be used as an engagement tool with current users. Marketing can also be used at the beginning stages of application life. There are many applications on most social networks. Expecting users to find yours through simple browsing or search may not be sufficient. Marketing your application can bring new users to it. Some marketing strategies are free, and others will require a budget. Your creativity is the limit, but let's take a look at some possibilities.

First, when you design applications, treat your application's viral channels as marketing vehicles. Designing your application with this in mind can lead you toward growth.

One example of using viral channels for marketing is to offer incentives to your users to invite friends. The incentive can be in the form of virtual goods, virtual cash, or some extended application features.

The ''Maffia new'' application uses two kinds of incentives to get users to invite their friends. As shown in Figure 1-32, the application offers the incentive of virtual money that can be used in the game. The application also offers incentives to users to invite new friends via a direct link into the game by becoming someone important, a ''Maffia Boss.''



Invite your friends and get more LR

Get up to 10,000 LR free for inviting one friend right now! (for every accept)

Figure 1-32: Maffia new application uses virtual currency as an incentive to invite friends

An emerging practice in applications is to direct users through a transaction that requires them to invite friends. For example, in the RockYou ''Likeness'' application, after taking a quiz to determine likeness when users click the Submit button, they are requested to invite friends as the next step in this transaction.

Unfortunately, many networks are limiting even more the use of these viral channels. For example, with the recent perception of application ''spam'' (too many messages from applications), smaller messaging limits have been set on networks. Some networks such as MySpace are currently not allowing applications to offer incentives (say, give virtual points) for users messaging others. User postings to the MySpace announcement (see `http://developer.myspace.com/Community/blogs/devteam/archive/2008/05/20/new-app-guidelines-must-read.aspx`) reflect a lot of negative feedback over this issue. Users like incentives. What this means for your application is that you must pay attention to the frequent changes in network policies.

A number of companies provide marketing services for applications. An example is SocialMedia, an advertising company focused on social networks and their applications. SocialMedia allows developers to set the price they want to pay for a click. This pricing is used in a real-time auction, and you can check out the live bids. SocialMedia describes this service as a way ''to inject your app with thousands of core targeted users and help you transform them into a million total users.''

Check out the interesting ''viral calculator'' they have at SocialMedia.com. For example, they calculate that, if you have a budget of $200, and each user will only refer your application to 1 other user, and this happens for 4 levels of referral, you will gain 4,000 users. With the same $200, if your referral rate is 1.25 and you have 4 levels of referral, you will gain 9,007 users. If cost is an issue, there are some newer companies that offer their marketing services in exchange for advertisement on your application.

Another model presented by OfferPal is a ''new App Install program.'' The program comes in three available payment terms:

❑ *Cost-Per-Click* — The Cost-Per-Click program is like SocialMedia's program.

❑ *Cost-Per-Install* — In the Cost-Per-Install program, you pay only for installed users. The price is typically higher than the Cost-Per-Click rate.

❑ *Free Click Exchange* — The Free Click Exchange program guarantees a qualified click to your install page for every click you deliver to other apps within the network.

Another marketing strategy is direct cross-application advertising. You could make agreements directly with other application developers, advertising one another's applications. Once you have more than one application, you can do your own cross-application.

As an example of self cross-advertising, Jambool uses its ''Reach'' application called ''Share Good Karma'' with a large user base to create larger audiences for their new ''Who's the cutest baby?'' and ''Ski Results'' applications. Both of these new applications are intended for vertical markets. Jambool wants to build communities around these new applications, and, hence, also extend the complexity and user response and attentiveness.

Another possibility is to purchase ''sponsored application'' status with a network. This is similar to being a sponsored site at a search engine such as Google or Yahoo!.

If your budget allows, you can opt to pay for direct marketing. The expense of these services will usually be out of bounds for beginning applications or developers. It is best used in ''branding'' attempts.

Direct marketing via email is another possibility. Best results are achieved when the mailings are targeted toward your intended demographic. As with all forms of marketing, you must be careful not to annoy and lose potential users.

Another less-evasive scheme is to maintain a company/developer Web site that is advertised on all of your applications. This can be a form of self cross-application marketing.

Indirect marketing schemes such as postings and blogs can be effective. You might even create your own blog about your application. Some developers have created video and uploaded it to YouTube and other media sites. Another option is using Twitter. The genuineness of these postings can be a question, however. People like blogs and postings.

Following are a couple of services for blogs and email that you might consider:

- ❑ *Blogs* — Blogger (`http://www.blogger.com`), World Press (`http://www.worldpress.org/blogs.htm`), Yahoo360 (`http://360.yahoo.com`), TypePad (`http://www.typepad.com`)
- ❑ *Email Marketing* — Constant Contact (`http://www.constantcontact.com/index.jsp`), Email Labs (`http://www.emaillabs.com`), JangoMail (`http://www.jangomail.com`), Exact Target (`http://email.exacttarget.com`)

Partnering is a form of co-marketing, but not necessarily with another application. For example a traditional (non-Web) company may partner with you. Recall the example of the ''Share Good Karma'' application and Health.com discussed previously.

Promotions you run in your application can also grow your user base. These might be in the form of a giveaway or lottery. It could be something more virtual, like being featured, in the application if you have invited many friends. You should check out a network's application guidelines before using this strategy.

A final technique to consider is sponsorship. This can go both ways. A company may decide to sponsor your application. This could include featuring you on its Web site and other forms of communications to the company's user base. Getting this kind of sponsorship requires building a relationship and sharing common business objectives. Another form of sponsorship is where your application sponsors an event, person, or product. Examples of this are common in event-oriented applications such as iLike.

A vast number of applications are not marketed beyond the use of viral channels. This includes many successful applications. A number of the larger developer companies are proud of not spending any money on marketing.

If you do choose to use some kind of marketing strategy, don't make the mistake of not tracking the results. This way you can tell into which strategy to invest more time and money.

Retention

Applications with lots of installs are great, but if you don't have good daily active use numbers, your application won't monetize and will quickly die. The best way to retain your users is through continual re-invention of your application.

Following are a few of the ways you can evolve your applications:

- ❑ New content
- ❑ Interface changes
- ❑ New functionality
- ❑ New viral channels
- ❑ Increased exposure of user and friend data
- ❑ Increased use of social data
- ❑ Increased use of user-generated content
- ❑ New marketing strategies (for example, seed to new audiences)
- ❑ Reach out to users who are fans of you application (if you have access)
- ❑ Rewards (for example, advanced features for most active users)
- ❑ Introduce (or advance) gaming elements for example, user versus user, collecting, role-playing/assignment (super user)
- ❑ Feature user-generated content
- ❑ Develop user-to-user sharing and communications
- ❑ Quickly launch on new containers
- ❑ Provide a ranking/rating mechanism

You should monitor your retention rates from the beginning — that is, upon deployment. Problems with retention, even as you are having viral growth, can be detected. Making changes to your retention strategy is important. If you are tracking retention (that is, the loss of users), then when you try a new retention idea, you can monitor if it was successful.

Tips for Good Application Development

You should put into practice a number of general application development tips that also apply to social network application development. These include making your application robust, making explicit requests, testing, and performance enhancements. Performance enhancements are tackled later in this book. For now, let's consider some forward-looking pointers on how these issues are handled in OpenSocial application development.

Robustness includes checking for errors and handling exceptions. Even when you have code that is correct, situations can happen in the containers that will return incorrect results (even temporarily). If your code does not handle these unexpected situations, it will fail. Your users will be upset. Unfortunately, container problems do arise, and you must be diligent in expecting these errors. Checking for null data (even if the container should give you back results) is an example of good exception handling.

The following OpenSocial tools will come in handy:

- ❑ *Built-in methods* — Built-in methods in OpenSocial classes such as `hadError()`are good to use when making data requests. A useful message for debugging possible container problems is the `getErrorMessage()` method in OpenSocial (which is discussed in more detail in Chapter 4). Another similarly useful method in OpenSocial is `getErrorCode()`.
- ❑ *Optional features* — OpenSocial has some optional features that will be detailed in Chapter 4. It is important when making applications in OpenSocial for multiple containers to check for support. This can be done in your program or via inquiry.
- ❑ *Explicit requests* — Because OpenSocial has optional features, whenever you make requests for data, you must be explicit in what you are requesting. For example, if you want to find out the name and age of a user, you must explicitly ask for this information. In OpenSocial, parameters such as `opensocial.DataRequest.PeopleRequestFields.PROFILE_DETAILS` can be used to explicitly request information. These are explored in more detail in Chapter 4.

The issues dealing with performance and hosting your applications are discussed in detail in Chapter 8. These back-end issues are critical if your application gains momentum and becomes viral. It's important even for smaller audiences when you want good user experience, and if you have a lot of media and data requests.

Another important issue to making ''good'' (well, in terms of money) applications is monetization. This chapter has touched upon a few trends in this area (specifically, virtual goods and partnering), but Chapter 8 looks into this area in a bit more detail.

Summary

This chapter began with a discussion of social network programming and described where OpenSocial fits in. As part of this, a number of OpenSocial containers were reviewed. Next, the topics of application discovery, installation, appearance and control were covered.

The remaining parts of this chapter focused on good application design and tips. This included the definition of application goals, viral channels and concluded with marketing and retention techniques.

Chapter 2 examines the history and architecture of OpenSocial, the architecture of an application, data formats supported by OpenSocial, and the deployment of applications.