

Big Brother is Watching

How Facebook tracks your online presence

By: Etienne Stalmans

Supervisor: Mr Barry Irwin



Email

Password

Login

Keep me logged in

[Forgot your password?](#)

Facebook helps you connect and share with the people in your life.



Sign Up

It's free and always will be.

First Name:

Last Name:

Your Email:

Re-enter Email:

New Password:

I am:


Birthday:

[Why do I need to provide this?](#)

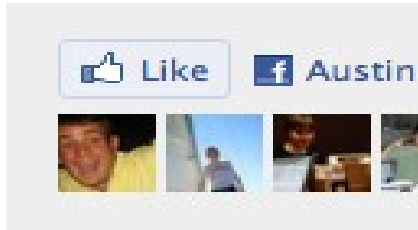
Sign Up

[Create a Page for a celebrity, band or business.](#)

Introduction

- A little side project of mine
- While playing with Burp Suite
 - Started noticing “strange” requests to Facebook with each web-page visit
- Facebook is on almost every website visited
 - Even the CS department website 
 - How does Facebook benefit from this?

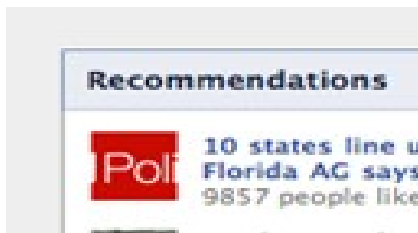
Social Plugins



Like Button



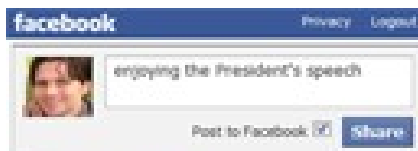
Activity Feed



Recommendations



Comments



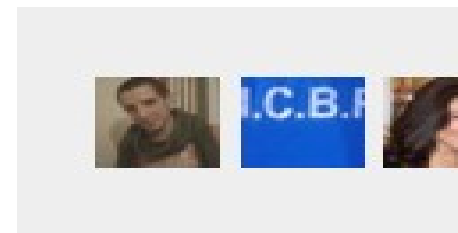
Live Stream



Registration



Login Button



Face Pile



Like Box

Easy to implement

Facebook Page URL (?)

Width (?)

Color Scheme (?)

Show Faces (?)

 Show Faces

Stream (?)

 Show stream

Header (?)

 Show header

Find us on Facebook



Facebook Platform

apps owning a test user we previously announced that test accounts c

source: Official Facebook Developer Blog
link: Full Article...

Friday at 4:34pm · via NetworkedBlogs

Facebook Platform



How to publish updates to people who like your Open Graph Page

As part of Operation Developer Love, we are continuing to update our documentation. Recently, I was talking with some developers in New York, and they were surprised to learn that they could publish updates to people who have liked their Open Graph Pages. You can

1,463,155 people like **Facebook Platform**.



Easy to implement

Your Like Box plugin code:

iframe

```
<iframe src="http://www.facebook.com/plugins/likebox.php?
href=http%3A%2F%2Fwww.facebook.com%2Fplatform&width=292&color
scheme=light&show_faces=true&stream=true&header=true&hei
ght=427" scrolling="no" frameborder="0" style="border:none; overflow:hidden;
width:292px; height:427px;" allowTransparency="true"></iframe>
```

XFBML

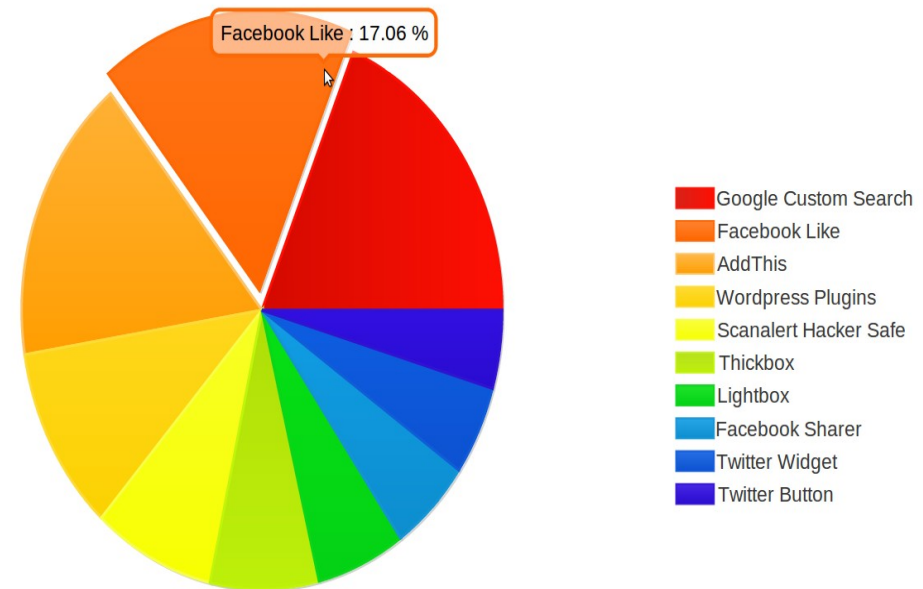
```
<script src="http://connect.facebook.net/en_US/all.js#xfbml=1"></script><fb:like-box
href="http://www.facebook.com/platform" width="292" show_faces="true"
stream="true" header="true"></fb:like-box>
```

Okay

Widespread

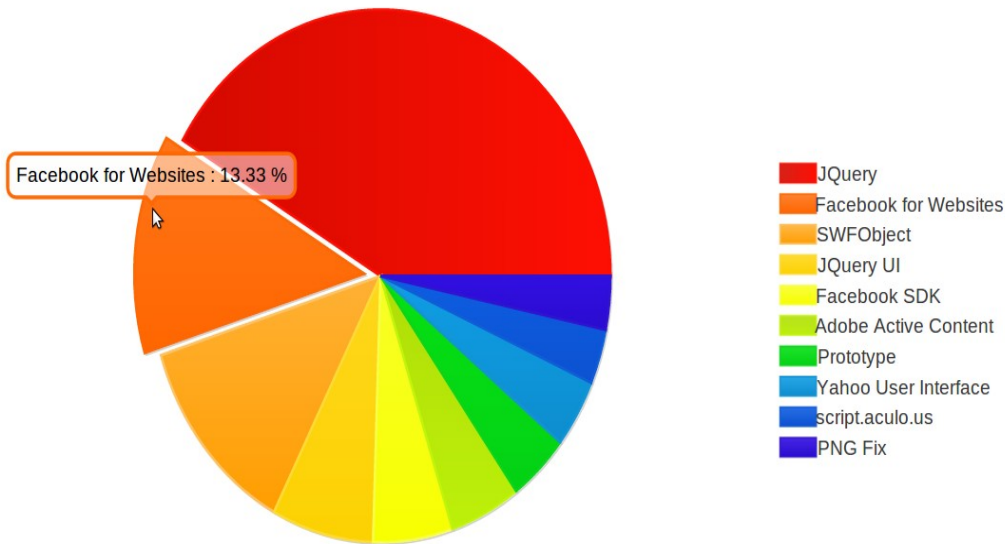
- FB “Like” on 2 million sites within 6 months after first launch*
- Gawker reported that their traffic shot up by 200 percent*
- Stats from trends.builtwith.com:
 - 690,562 sites use “Facebook for websites” → 32,279 of the 1 million most visited sites
 - Over 45,028 sites implement the “Like box”
 - 35,114 sites with FB Login with Faces
 - Google Gadgets: 80,933 sites

Distribution is calculated from the top 10,000 websites on the internet. See the [FAQ for more information](#). Last calculated on February 15 2011.



Widespread

Distribution is calculated from the top 10,000 websites on the internet. See the [FAQ for more information](#). Last calculated on February 15 2011.



<http://trends.builtwith.com/javascript>

<http://developers.facebook.com/docs/insights/>

Facebook Platform

View Page - View Old Page Insights

Export Create an Ad

Users

Monthly Active Users **666,866** ↑2%
Daily New Likes **8,882** ↑5.5%
Total Likes **836,885** ↑0.85%

Lifetime Total Likes Daily Active Users

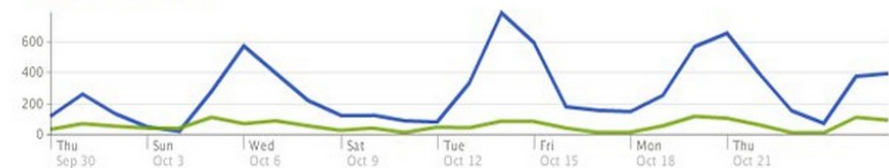


Interactions

Daily Post Views **914,168** ↓2.9%
Daily Post Feedback **146** ↓55%

Page Content Feedback?

Likes Comments



Information Collected

Privacy agreement states:

When you access Facebook from a computer, mobile phone, or other device, we may collect information from that device about your

- browser type,
- location,
- and IP address,
- as well as the pages you visit

Information is gathered even when you don't click on the "Like" button

Information Shared

Information provided to advertisers:

Demographic metrics

- Age
- Gender
- Location

Profile metrics:

- Interests
- Favourite movies
- Books

Even when your privacy settings are set to not display this information to other people, Facebook reserves the right to sell it to 3rd parties...

Default Privacy Settings

Sharing on Facebook

These settings control who can see what you share.

	Everyone	Friends of Friends	Friends Only
Everyone			
Friends of Friends			
Friends Only			
Recommended ✓			
Your status, photos, and posts	•		
Bio and favorite quotations	•		
Family and relationships	•		
Photos and videos you're tagged in		•	
Religious and political views		•	
Birthday		•	
Permission to comment on your posts			•
Places you check in to [?]			•
Contact information			•
<input checked="" type="checkbox"/> Share a tagged post with friends of the friend I tag			
Customize settings			✓ This is your current setting.

Typical GET Request

Logged out

```
GET http://www.facebook.com/plugins/activity.php?site=http%3A%2F%2Fwww.supersport.com%2F&width=300&height=300&header=true&colorscheme=light HTTP/1.1
```

```
Host: www.facebook.com
```

```
Referer: http://supersport.com/
```

```
~~~
```

```
Cookie: locale=en_US; cur_max_lag=20; L=20; lu=wgZE29T7RtUvh9NDLnxQtBmw; lsd=VPa1p; presence=DJ296119186BchADhA_2215.channel_22BsubA_5b0_5dBf296119193624BptMvis MblsMblcMsndMctMsbPBtA_5b_5dBfAnullBuctMsMbloMbvtA0QBblADacMutP296119137Z900BlcA0QQ; act=1296121604497%2F1;
```

```
datr=Rn89TRckzJ0jFfk_hnrCJVG_;
```

```
reg_fb_gate=http%3A%2F%2Fwww.facebook.com%2Flogin.php;
```

```
reg_fb_ref=http%3A%2F%2Fwww.facebook.com%2Flogin.php; wd=300x255
```

Logged in

```
GET http://www.facebook.com/plugins/activity.php?site=http%3A%2F%2Fwww.supersport.com%2F&width=300&height=300&header=true&colorscheme=light HTTP/1.1
```

```
Cookie: locale=en_US; c_user=903585093; cur_max_lag=20;
```

```
datr=Rn89TRckzJ0jFfk_hnrCJVG_; L=20;
```

```
lu=wgZE29T7RtUvh9NDLnxQtBmw;
```

```
sct=1296122791; xs=61%3A8f1dfca675605aaaf72f2994dc16a092; act=1296122866502%2F7;
```

```
presence=DJ296122865BchADhA_2215.channel_22BsubA_5b0L903585093MF296122872188BptMvisM blsMblcMsndMctMsbPBtA_5b_5dBfAnullBuctMsMbloMbvtA0QBblADacMutMudA900BlcA0QQ
```

The Cookie

Name: datr

Content: 9r1BTWqiozdPWwiKe-nZRzJw

Domain: .facebook.com

Path: /

Send For: Any kind of connection

Accessible to Script: No (HttpOnly)

Created: Sunday, February 20, 2011 1:12:18 PM

Expires: Tuesday, February 19, 2013 1:11:57 PM

Name: lu

Content: QAOsZ0xNESqR3dkt4QQULRdw

Domain:.facebook.com

Path:/

Send For:Any kind of connection

Accessible to Script:No (HttpOnly)

Created:Sunday, February 20, 2011 11:33:17 AM

Expires:Tuesday, February 19, 2013 11:32:58 AM

→Cookies valid for 2 years...

→Remember Firesheep?

- HTTPS should help combat
- But..... HTTPS not mandatory for FB
- Users must activate HTTPS in account settings

The Cookie jar

- Even when you do not have a FB account, you are “tracked”
- When you visit a site that has “FB connect” social plugin a cookie is generated for you
- This cookie is sent to FB every time you visit a page that has the “Like” button
- Imagine if 40 million unique visitors (a month) go to a site hosting Facebook Connect...
- CNN.com had 30 million unique visitors in a day during US election
 - CNN.com is one of Facebook's “Showcase” websites for social plugins

Counter-Measures

- Facebook Disconnect plugin – Brian Kennish



```
if (!isMatching(location.href, DOMAINS)) {  
  document.addEventListener("beforeload", function(event) {  
    if (isMatching(event.url, DOMAINS)) event.preventDefault();  
  }, true);  
}
```

- Adblock - Blacklist



```
/extern/login_status.php  
/connect.php/en_US/*  
/plugins/like.php  
/en_US/all.js  
plugins/activity  
connect.facebook.net/
```

- Google Chrome (Dev) allows blocking of 3rd party cookies



- Not part of the “opt-out” program

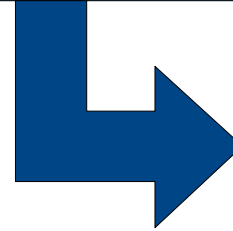
Not seen as a tracking company

privacychoice Tools FAQ Blog



Your privacy.
Your choice.

Free tools to
make it easier.



Curious?

See who's watching
Explore your profile
Track the trackers

Want control?

Get Do-Not-Track
Opt-out of ad targeting
Guard your social profile
Help protect loved ones

PrivacyChoice has delivered over **40 million opt-outs** - read [MacLife's recommendation](#)

[Tracker Index](#) [Website tools](#) [Contact](#) [Privacy](#)

© 2009-11 PrivacyChoice



So what?

- Is this really an issue?
 - We already give FB access to every other aspect of our lives
 - Relationships
 - Photos
 - Friends
 - Messages
 - No way to automatically log out of FB
- US Air Force issues request for FB fake persona management software
 - www.fbo.gov/index?s=opportunity&mode=form&id=d88e9d660336be91552fe8c1a51bacb2&tab=core&_cview=1
 - Do you want to give “the man” even more access to your habits?
- HBGary Federal email leak shows research being done into tracking individuals using Facebook
- Current trend of people wanting to opt-out of 3rd party tracking.
 - Why isn't FB being forced to be part of this?
 - IE9 comes with built-in do-not track, does this include FB
 - How would this affect the Facebook + Microsoft relationship?
 - Firefox 4 implementing do-not track features as well

Questions?



Like