

## Developers' Choice: Web 2.0 Developer Programs

A comprehensive study of over 400 software  
developers

June 2007

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## Developers' Choice: Web 2.0 Developer Programs

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*"..developers project  
more integration with  
eBay next year than any  
other company..."*

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### Overview

This last year has been an exciting time for companies looking to expand their developer base by offering resources to developers and the ability for them to integrate added functionality into their applications. Specifically, large retailers like Amazon and information portals like Yahoo and Google have emulated Microsoft's developer program model—providing tools, forums, extensive documentation and even certification. Central to this evolution is Web Services technology, which allows an ecosystem of partners connected via a broad net of shared resources. The promise of interoperability associated with this technology allows these companies to posture themselves as the platforms on which third-party applications will run. In some cases, companies are even offering computing resources and security solutions that significantly reduce the development workload for their partners.

This report exposes the level of satisfaction that developers have with some the major companies moving in this direction: Amazon, eBay, Google, MSN, PayPal and Yahoo. Given the fact that Web Services are at the heart of most programs, with companies in the Web 2.0 space gaining market share and presence by extending APIs to developers writing Web Services applications, it makes sense that developers are most impressed with how these companies are offering that technology. Tools and API functionality also rank at the top of program features developers are most satisfied with.

There is a significant range of satisfaction with the different vendors in terms of other program aspects. For example, Microsoft and Yahoo score well with their blogs and forums but Amazon and PayPal are seen to have a weakness there. Likewise, eBay appears to offer good marketing assistance but MSN is lagging in this area. The company with the best ratings overall is eBay, followed by Yahoo and MSN. Though in fourth place, Google also garners respectable marks. At the bottom of the list are Amazon and PayPal. The latter's finish does not come as a surprise, given the company's niche role, but lack of developer satisfaction with Amazon's program is noteworthy.

Outside of the individual features in their program, the companies here were also reviewed in terms of such issues as security, ease of integration, and downtime. While eBay is the company with which developers have had the most problems with outages and downtime, and it is also the company with which developers have had the most difficulty integrating their applications with, developers have recognized financial benefits from working with eBay. This last piece in the puzzle, as well as the fact that eBay offers superior

support and documentation, explains why developers project more integration with eBay next year than any other company here. It also doesn't hurt that they recognize eBay's Web Services and APIs to be the best of the bunch.

Also with clear strength in Web Services, Amazon provides more financial gains for developers than any other company listed here. Overall, 50% of respondents project increases in integration next year. This makes sense on the surface, considering the level of tangible financial benefits associated with such integration, but a closer look reveals that this is actually the lowest per capita projected increase of integration of all the companies reviewed here. Investigation of the individual components of Amazon's developer program reveals numerous weaknesses, leading to the lowest overall score of any company outside of PayPal. Respondents point to poor support and documentation (with the exception of FAQs), as well as the fact that Amazon suffers from some significant outages on their site. For what it's worth, though, developers are not critical of Amazon's security.

Going forward, PayPal is projected to gain an increase in integration as more and more developers look to develop applications with e-commerce solutions. Security is critical to PayPal and their users—despite the fact that the FDIC has decided that it is not a bank, online transaction processing (OLTP) is fundamental to their business—so it should not come as a surprise that it is rated the best in that regard. It is not something that in itself helps developers make money, but rather represents an important piece in the puzzle for other companies that yield financial benefits. Along the same lines, PayPal is not known for its forums and developer community.

Yahoo stands somewhat in the middle of the road in terms of security and downtime. It does not directly appear to be helping developers make much money, but this doesn't mean that they aren't planning to integrate with it more next year. Yahoo has established itself as a fixture in the Web 2.0 world and continues to offer innovations and value that developers can build into their applications (e.g., they appear to particularly appreciate Yahoo's beta software and evaluations). This success can partially be explained by the fact that Yahoo scores better than any other company in the area of ongoing communications. From a technical point of view, its Web Services and APIs are very well regarded. From a community point of view, developers see strong value in Yahoo's forums and blogs

As the new kid on the block, Google is a Web 2.0 company that offers developers tremendous benefit in integration—even though it does not directly equate with tangible financial benefit. Perceptions about Google's security fall comparatively below that of the other companies listed here, but it is still respectable. Outside of PayPal, Google has suffered the least from downtimes. It is also understood to be the easiest to integrate with. Interestingly, it is said to offer even better tools than MSN.

Microsoft's MSN portal has been around for the longest of all the companies listed here. It follows, then, that developers have been integrating with it for longer than the rest. Familiarity with MSN explains its popularity, even though integration may not always be easy (ongoing communication appears to be a problem) and the financial payoff from doing so is not always apparent (note MSN's low score in marketing assistance). One of the biggest values of MSN is its forums and blogs, which enjoy a very large community. MSN also ranks at the top with its offerings of tools and beta software.

## Web 2.0 Integration Issues

The degree of success with developers seeking to integrate their applications with online companies rests on a complex set of variables—from actual integration issues to downtime problems, security and the financial return on investment. This table reveals how the companies reviewed here stack up in the personal experience of developers working with them.

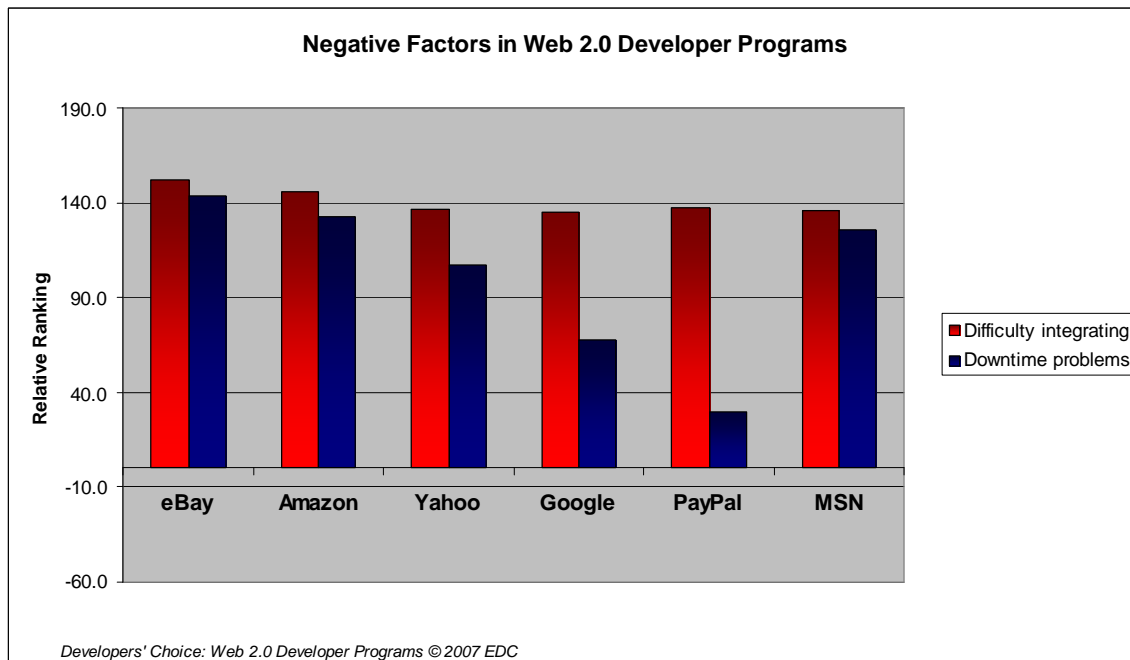
	Difficulty integrating	Financial benefit	Level of security	Downtime problems
eBay	151.9	122.2	165.7	143.2
Amazon	146.0	128.0	208.1	132.5
Yahoo	136.5	85.8	177.4	107.2
Google	134.8	72.8	170.8	67.8
PayPal	137.7	98.7	214.7	29.6
MSN	136.0	109.5	174.4	125.6

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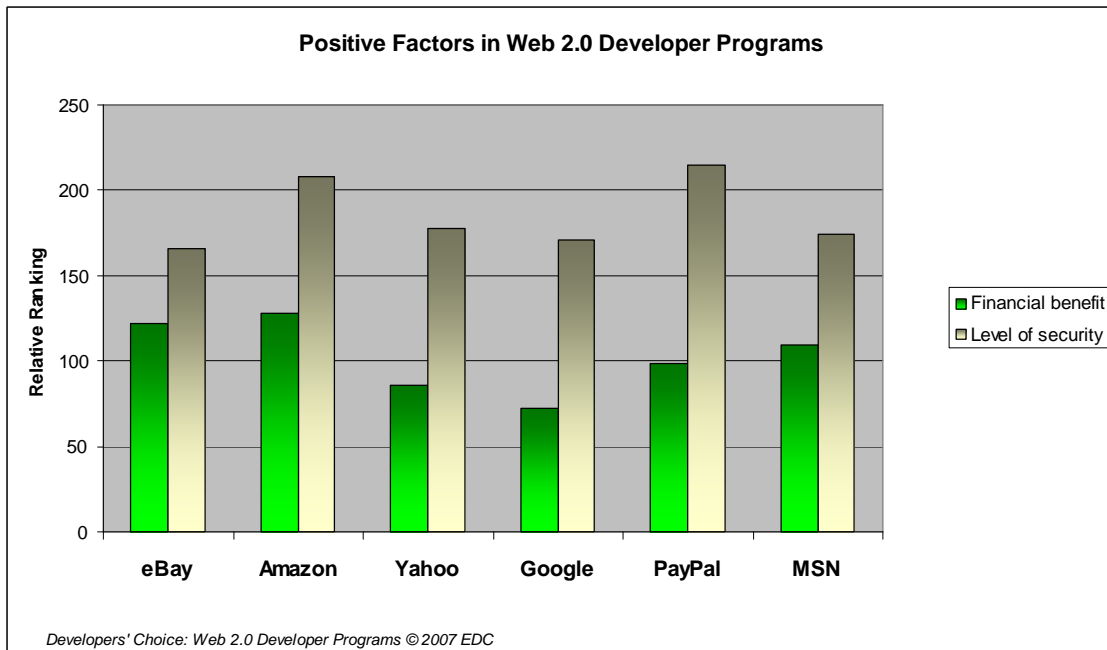
This table reveals how the developers rate the companies that they have been working with—in terms of downtime problems, integration difficulties, financial benefit and security. For the former two categories, higher numbers indicate severity of the problem. For the latter two categories, higher numbers indicate a higher degree of benefit.

### Negative Development Factors by Company

Putting these numbers into a graphical representation helps to show the winners and losers, both in terms of the negative factors and the positive factors associated with integration. For example, in the chart below, eBay gets the most developers criticizing its problems of downtime and overall integration hurdles. PayPal and Google apparently have had the least problems with downtimes.



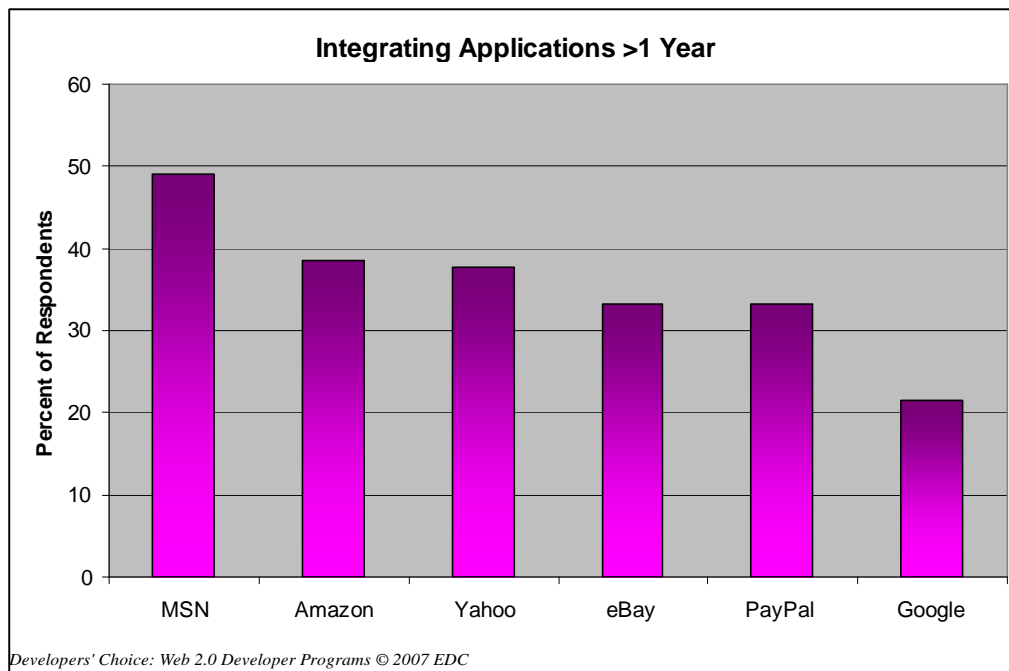
## Positive Development Factors by Company



In terms of the positive aspects of integration, Amazon and eBay are considered to provide the most financial benefits from integrating (compared to Google). PayPal has the best security, relatively speaking. When asked how long they have been integrating their applications with the various companies, developers answered between 'less

## Percent of Respondents Integrating Apps in Less Than 1 Year by Company

As seen in the chart below, Microsoft's MSN site has the most veteran users. Amazon and Yahoo also can also boast that more than a third of developers integrating with them have been at it for more than a year. By contrast, only 21% of those integrating with Google have been doing it more than twelve months.



## Length of Time Integrating Web 2.0 Applications by Company

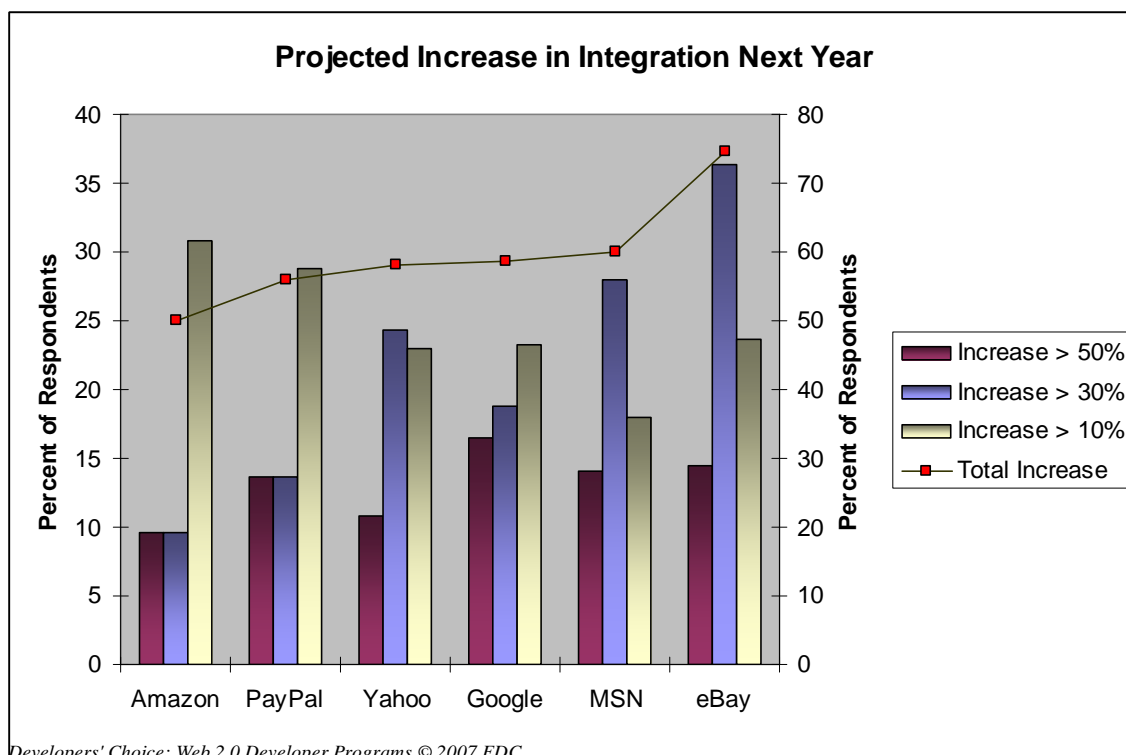
The exact breakout of time spent with the various companies is described below, with a third of developers integrating with Google only doing so for less than three months. By contrast, MSN has 41% of its developer base integrating for more than two years.

Length of time integrating with site	< 3 months	3-6 months	7-12 months	13-24 months	> 2 years
Google	32.9	25.4	20.2	6.4	15.0
eBay	27.8	16.7	22.2	14.8	18.5
Yahoo	27.0	24.3	10.8	9.5	28.4
PayPal	26.7	21.7	18.3	13.3	20.0
Amazon	25.0	15.4	21.2	15.4	23.1
MSN	18.4	18.4	14.3	8.2	40.8

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## Projected Increase in Web 2.0 Integration Next Year by Company

This chart delineates the varying levels of growth projected for the companies, with eBay developers being the most optimistic.



## Web 2.0 Developer Programs

### Overall Program Rankings

This summary table of the companies' developer program attributes provides specific information on the winners (highlighted in red). These ratings are also provided on the following pages, sorted by company.

The overall program rankings were compiled by aggregating the responses of developers familiar with the various companies. To an initial baseline of 100 were added answers ranging from 'excellent' to 'poor' and assigned numerical values (i.e., ('excellent' \*3) + ('very good' \*2) – ('satisfactory' \*2) – ('poor' \*3)).

	eBay	Amazon	Yahoo	Google	PayPal	MSN
<b>Tools</b>	185.2	172.0	169.9	194.2	150.8	194.1
<b>Forums</b>	121.2	120.4	162.2	154.2	80.3	178.4
<b>Blogs</b>	122.4	102.0	145.9	131.5	62.3	167.3
<b>Certification Programs</b>	158.2	75.5	122.7	119.4	83.1	140.8
<b>Support</b>	143.1	65.3	118.9	128.6	136.1	119.6
<b>Documentation</b>	157.1	100.0	126.4	133.5	108.2	141.2
<b>Beta SW / Evals</b>	151.0	89.38	149.3	123.1	103.4	164.0
<b>Case studies</b>	140.4	63.3	118.9	87.1	86.7	125.5
<b>FAQs</b>	126.4	141.3	98.6	126.6	101.7	136.0
<b>Solutions directories</b>	132.7	61.2	127.8	129.9	88.1	126.0
<b>IM capabilities</b>	132.7	89.8	134.7	111.3	74.1	149.0
<b>Ongoing communications</b>	143.1	106.1	151.4	122.4	59.3	52.0
<b>Marketing assistance</b>	156.0	120.4	142.7	135.8	93.3	102.0
<b>Web Services</b>	202.0	181.6	193.2	186.6	154.4	145.1
<b>API functionality</b>	184.9	128.6	164.0	164.3	150.8	150.0
<i>Developers' Choice: Web 2.0 Developer Programs © 2007 EDC</i>						

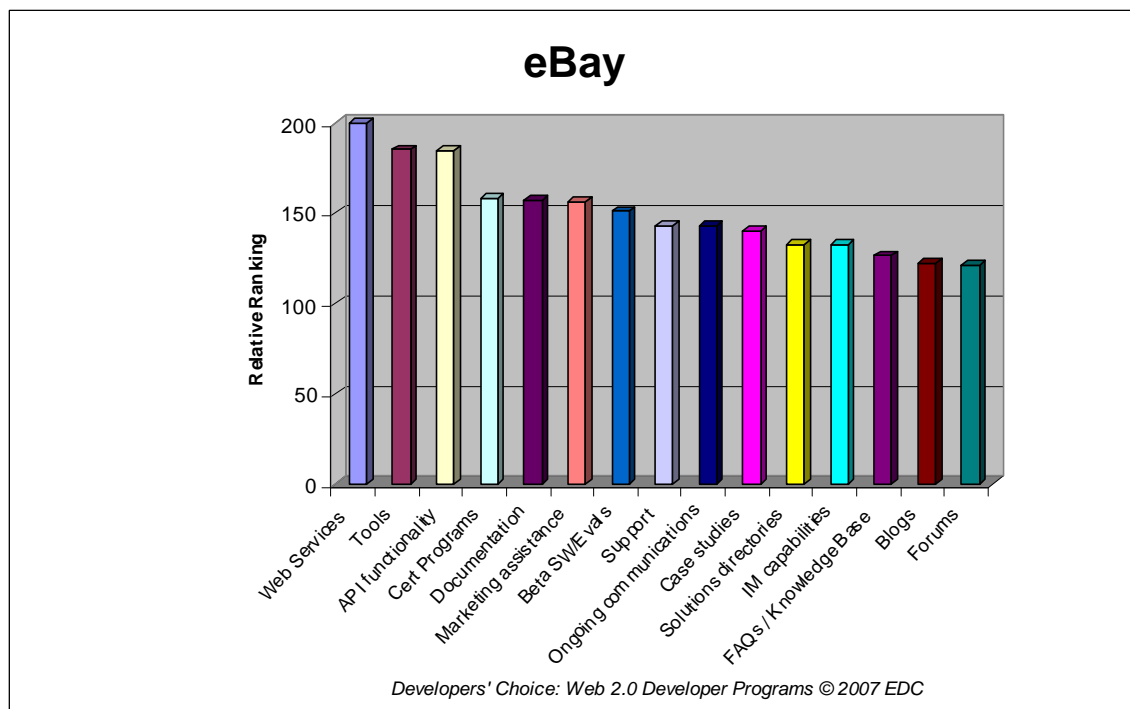
## Overall Web 2.0 Integration Ratings by Company

All in all, eBay can be regarded as having the best developer program of the companies reviewed here. Many aspects of its program outperformed those of its competitors, from certification to documentation, case studies, solutions directories and marketing assistance—not to mention Web services and API functionality.

The clear strength of eBay lies in Web Services. Web Services are integral to eBay's business, allowing third-party developers to create Web-based applications to conduct business with the eBay platform and via a similar interface as that of eBay. Hand in hand with Web Services is the functionality of APIs, also a strong suit of eBay.

Tools place towards the top of the list, reflecting strong developer satisfaction with eBay's API testing tools and so forth.

The relative weakness of eBay's FAQs/knowledge base and forums suggests that developers may not always be able to access information easily in this way. Satisfaction with support appears to be only mediocre, but eBay actually gets the best ratings in this area of all the businesses reviewed here.



## eBay: Length of Integration History

How long have you been integrating your services with eBay's site?

	Valid Percent	Cumulative Percent
Valid Less than 3 months	27.8	27.8
3 - 6 months	16.7	44.4
7 - 12 months	22.2	66.7
13 - 24 months	14.8	81.5
More than 2 years	18.5	100.0
Total	100.0	

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## eBay: Percent of Applications Integrated

What percent of your applications are currently integrated with eBay's site?

	Valid Percent	Cumulative Percent
Valid 1-25%	81.8	81.8
26-50%	7.3	89.1
51-75%	5.5	94.5
76-100%	5.5	100.0
Total	100.0	

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## eBay: Projected Change in Applications

In the next 12 months do you think this number will:

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	14.5	14.5
Increase more than 30%	36.4	50.9
Increase more than 10%	23.6	74.5
Insignificant increase / Will stay the same	10.9	85.5
Don't know	14.5	100.0
Total	100.0	

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## eBay: Degree of Financial Profit

To what degree have you or your team profited financially from integrating with eBay's site?

	Valid Percent	Cumulative Percent
Valid Not at all	24.1	24.1
Slightly	11.1	35.2
Somewhat	44.4	79.6
Significant	11.1	90.7
Very significant	9.3	100.0
Total	100.0	

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## eBay: Level of Security Associated with Integration

### eBay: Difficulty of Integrating Applications

Please rate the difficulty of integrating your applications with eBay's site.

	Valid Percent	Cumulative Percent
Valid Not at all	17.3	17.3
Slightly	15.4	32.7
Somewhat	40.4	73.1
Significantly	17.3	90.4
Very significantly	9.6	100.0
Total	100.0	

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Please rate the level of security associated with integration with eBay's online site.

	Valid Percent	Cumulative Percent
Valid Not at all	14.5	14.5
Slightly	10.9	25.5
Somewhat	47.3	72.7
Significantly	20.0	92.7
Very significantly	7.3	100.0
Total	100.0	

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## eBay: Extent of Downtime Issues

To what extent have you been affected by downtime/outages at eBay's site?

	Valid Percent	Cumulative Percent
Valid Not at all	18.9	18.9
Slightly	15.1	34.0
Somewhat	43.4	77.4
Significantly	11.3	88.7
Very significantly	11.3	100.0
Total	100.0	

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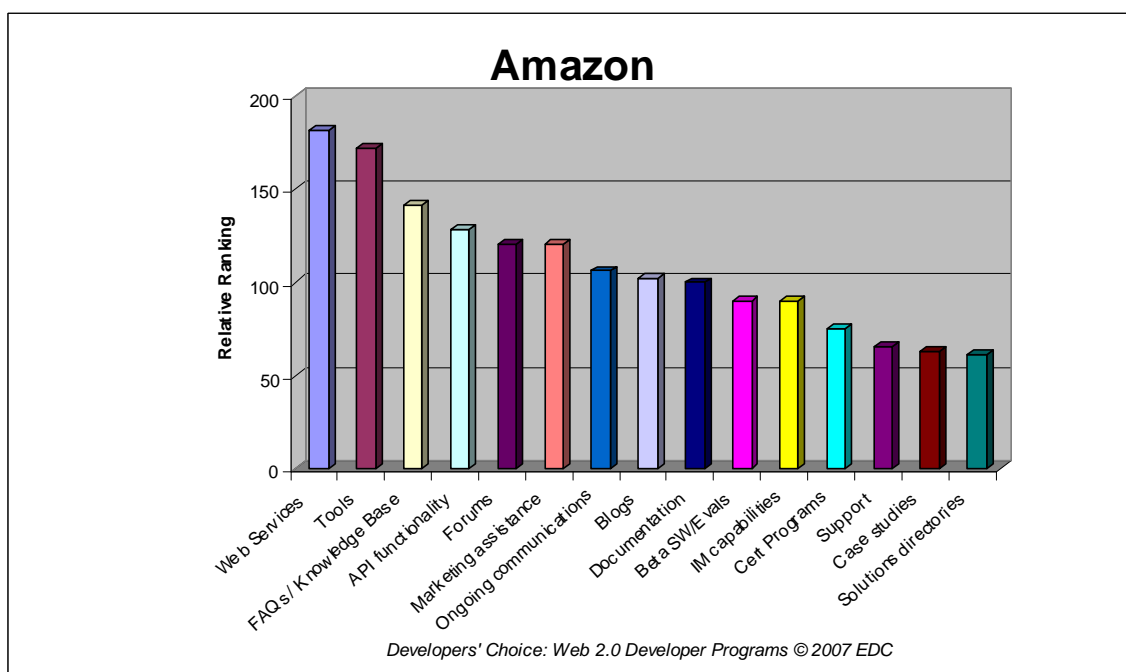


## Amazon

Like eBay, Amazon has succeeded the most in its developer program with Web Services. This makes sense, considering its overall success in the market and facilitating third-parties (like independent bookshops) to transact via its interface. The functionality of its APIs could stand to be improved, however, according to respondents.

Amazon's tools are also well regarded. Amazon's awareness of putting priority reflects its understanding that tools comprise one of the most important components of any developer program.

Overall, Amazon's program only scores mediocre because of the perception around many other aspects of its programs. Many respondents only see Amazon's documentation and so forth as satisfactory, while support, case studies and solutions directions were actually criticized.



## Amazon: Length of Integration

How long have you been integrating your services with Amazon's site?

	Valid Percent	Cumulative Percent
Valid Less than 3 months	25.0	25.0
3 - 6 months	15.4	40.4
7 - 12 months	21.2	61.5
13 - 24 months	15.4	76.9
More than 2 years	23.1	100.0
Total	100.0	

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## Amazon: Percent of Applications Integrated

What percent of your applications are currently integrated with Amazon's site?

	Valid Percent	Cumulative Percent
Valid 1-25%	87.2	87.2
26-50%	4.3	91.5
51-75%	4.3	95.7
76-100%	4.3	100.0
Total	100.0	

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## Amazon: Projected Change in Applications Integrated

In the next 12 months do you think this number will:

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	9.6	9.6
Increase more than 30%	9.6	19.2
Increase more than 10%	30.8	50.0
Insignificant increase / Will stay the same	30.8	80.8
Don't know	19.2	100.0
Total	100.0	

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## Amazon: Degree of Financial Profit

To what degree have you or your team profited financially from integrating with Amazon's site?

	Valid Percent	Cumulative Percent
Valid Not at all	22.0	22.0
Slightly	12.0	34.0
Somewhat	48.0	82.0
Significant	8.0	90.0
Very significant	10.0	100.0
Total	100.0	

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## Amazon: Extent of Downtime Issues

To what extent have you been affected by downtime/outages at Amazon's site?

	Valid Percent	Cumulative Percent
Valid Not at all	16.3	16.3
Slightly	26.5	42.9
Somewhat	38.8	81.6
Significantly	12.2	93.9
Very significantly	6.1	100.0
Total	100.0	

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## Amazon: Difficulty of Integrating Applications

Please rate the difficulty of integrating your applications with Amazon's site.

	Valid Percent	Cumulative Percent
Valid Not at all	14.0	14.0
Slightly	24.0	38.0
Somewhat	42.0	80.0
Significantly	14.0	94.0
Very significantly	6.0	100.0
Total	100.0	

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## Amazon: Level of Security Associated with Integration

Please rate the level of security associated with integration with Amazon's online site.

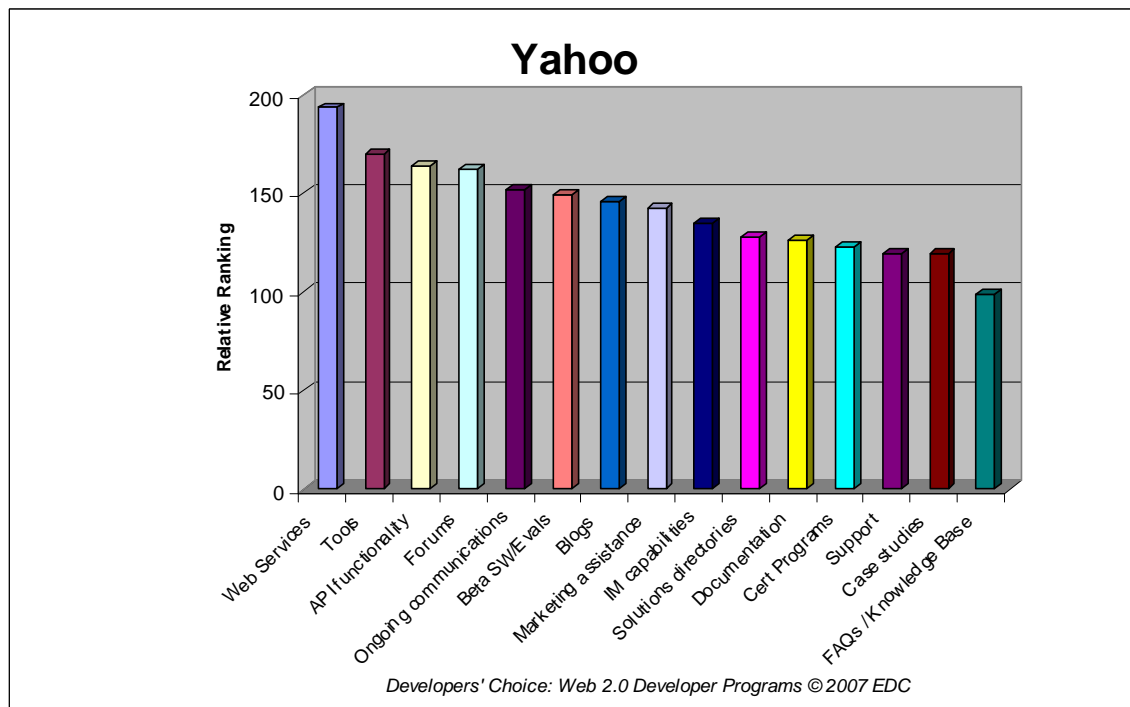
	Valid Percent	Cumulative Percent
Valid Not at all	4.2	4.2
Slightly	16.7	20.8
Somewhat	47.9	68.8
Significantly	20.8	89.6
Very significantly	10.4	100.0
Total	100.0	

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## Yahoo: Length of Integration History

Web Services comprise the strong point of Yahoo's program, reflecting this company's focus on opening its data portal for developers looking to build applications and mash-ups. API functionality is again closely linked to Web Services satisfaction. Yahoo developers are also generally pleased with the tools provided to them. Developer kits offer functionality in various areas, including messaging, search, music and widget development.

Despite the fact that Yahoo offers clear links in its developer network site to FAQs and case studies of "cool applications" being developed by members, respondents here only showed a lukewarm response this part of Yahoo's program. Users are more critical of Yahoo's FAQs and knowledge base than any other company reviewed here. Forums and ongoing communications have been proving a more effective way for them to get the information that they need. In fact, as regards the latter Yahoo leads the way. Yahoo also comes in second place—after MSN—with its blogs, which amongst other things offer advice from top Yahoo developers on best practices and updates.



## Yahoo: Percent of Applications Integrated

**What percent of your applications are currently integrated with Yahoo's site?**

	Valid Percent	Cumulative Percent
Valid 1-25%	63.2	63.2
26-50%	22.1	85.3
51-75%	5.9	91.2
76-100%	8.8	100.0
Total	100.0	

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## Yahoo: Length of Integration History

**How long have you been integrating your services with Yahoo's site?**

	Valid Percent	Cumulative Percent
Valid Less than 3 months	27.0	27.0
3 - 6 months	24.3	51.4
7 - 12 months	10.8	62.2
13 - 24 months	9.5	71.6
More than 2 years	28.4	100.0
Total	100.0	

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## Yahoo: Degree of Financial Profit

## Yahoo: Projected Change in Applications Integrated

**In the next 12 months do you think this number will:**

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	10.8	10.8
Increase more than 30%	24.3	35.1
Increase more than 10%	23.0	58.1
Insignificant increase / Will stay the same	13.5	71.6
Don't know	28.4	100.0
Total	100.0	

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**To what degree have you or your team profited financially from integrating with Yahoo's site?**

	Valid Percent	Cumulative Percent
Valid Not at all	30.6	30.6
Slightly	16.7	47.2
Somewhat	36.1	83.3
Significant	8.3	91.7
Very significant	8.3	100.0
Total	100.0	

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## Yahoo: Difficulty of Integrating Applications

**Please rate the difficulty of integrating your applications with Yahoo's site.**

	Valid Percent	Cumulative Percent
Valid Not at all	14.1	14.1
Slightly	31.0	45.1
Somewhat	36.6	81.7
Significantly	12.7	94.4
Very significantly	5.6	100.0
Total	100.0	

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## Yahoo: Level of Security Associated with Integration

**Please rate the level of security associated with integration with Yahoo's online site.**

	Valid Percent	Cumulative Percent
Valid Not at all	11.3	11.3
Slightly	21.1	32.4
Somewhat	35.2	67.6
Significantly	21.1	88.7
Very significantly	11.3	100.0
Total	100.0	

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## Yahoo: Extent of Downtime Issues

**To what extent have you been affected by downtime/outages at Yahoo's site?**

	Valid Percent	Cumulative Percent
Valid Not at all	24.3	24.3
Slightly	22.9	47.1
Somewhat	32.9	80.0
Significantly	12.9	92.9
Very significantly	7.1	100.0
Total	100.0	

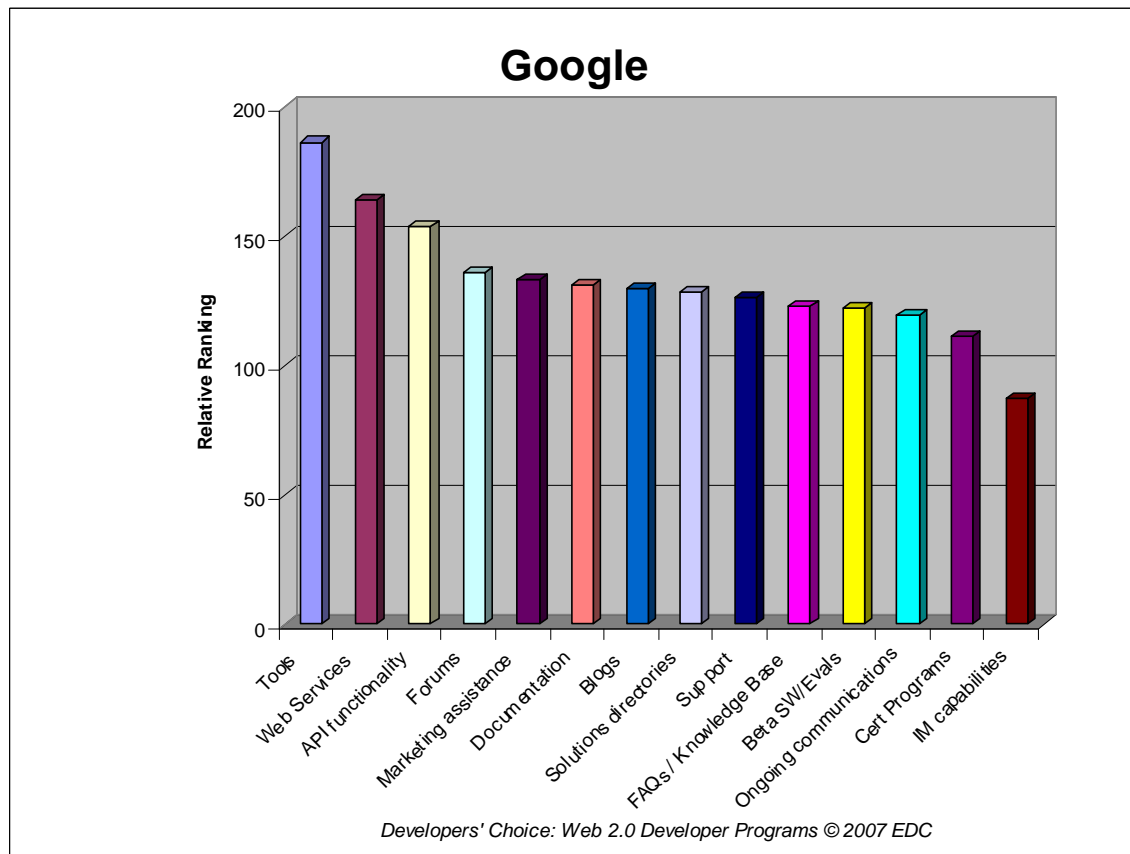
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## Google

Google dominates with its tools. Its Web toolkit (GWT) is an Open Source Java development framework for writing AJAX applications (like Google Maps and Gmail). Developers are able to write in Java, which is then compiled to browser-compliant JavaScript and HTML.

Google is also well regarded for its Web services and API functionality for search, etc. Google's forum, under the aegis of Google Groups, also ranks relatively high (in third place after MSN and Yahoo).

Google succeeds more or less with the other components of its program. Documentation appears to be decent and it comes close to leading the way with marketing assistance (after eBay). By contrast, Google Talk falls to the bottom without support for Mac OSX or Linux. Case studies also leave much to be desired: a simple search of this term on Google's Developer Network site pulled up only one example (on AdSense).



## Google: Percent of Applications Integrated

**What percent of your applications are currently integrated with Google's site?**

	Valid Percent	Cumulative Percent
Valid 1-25%	67.1	67.1
26-50%	20.5	87.6
51-75%	9.3	96.9
76-100%	3.1	100.0
Total	100.0	

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## Google: Length of Integration History

**How long have you been integrating your services with Google's site?**

	Valid Percent	Cumulative Percent
Valid Less than 3 months	32.9	32.9
3 - 6 months	25.4	58.4
7 - 12 months	20.2	78.6
13 - 24 months	6.4	85.0
More than 2 years	15.0	100.0
Total	100.0	

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## Google: Projected Change in Applications Integrated

**In the next 12 months do you think this number will:**

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	16.5	16.5
Increase more than 30%	18.8	35.2
Increase more than 10%	23.3	58.5
Insignificant increase / Will stay the same	20.5	79.0
Decrease by more than 10%	1.7	80.7
Don't know	19.3	100.0
Total	100.0	

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## Google: Degree of Financial Profit

**To what degree have you or your team profited financially from integrating with Google's site?**

	Valid Percent	Cumulative Percent
Valid Not at all	32.9	32.9
Slightly	20.2	53.2
Somewhat	28.9	82.1
Significant	11.0	93.1
Very significant	6.9	100.0
Total	100.0	

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## Google: Difficulty of Integrating Applications

**Please rate the difficulty of integrating your applications with Google's site.**

	Valid Percent	Cumulative Percent
Valid Not at all	11.4	11.4
Slightly	37.1	48.6
Somewhat	37.7	86.3
Significantly	9.7	96.0
Very significantly	4.0	100.0
Total	100.0	

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## Google: Level of Security Associated with Integration

**Please rate the level of security associated with integration with Google's online site.**

	Valid Percent	Cumulative Percent
Valid Not at all	11.1	11.1
Slightly	19.3	30.4
Somewhat	42.7	73.1
Significantly	19.3	92.4
Very significantly	7.6	100.0
Total	100.0	

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## Google: Extent of Downtime Issues

**To what extent have you been affected by downtime/outages at Google's site?**

	Valid Percent	Cumulative Percent
Valid Not at all	32.9	32.9
Slightly	22.0	54.9
Somewhat	28.9	83.8
Significantly	11.0	94.8
Very significantly	5.2	100.0
Total	100.0	

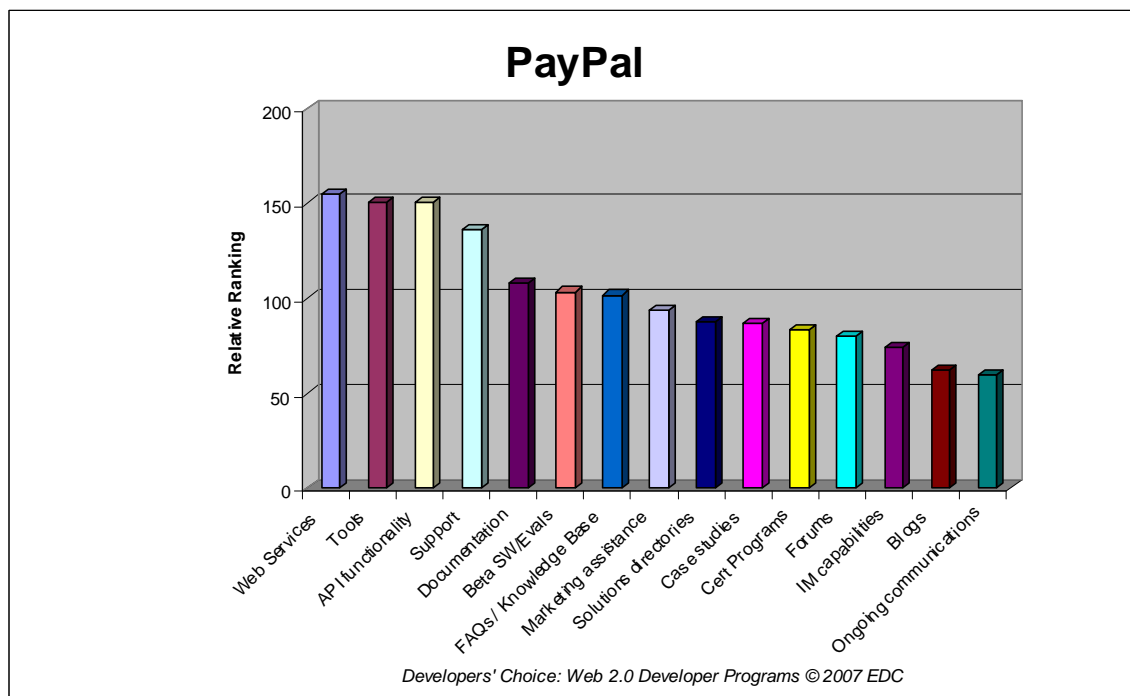
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## PayPal

PayPal stands out among the companies reviewed here as a financial transactor rather than merchant or information portal. It must also be noted that it was acquired by eBay in 2002 in a move to remove competition among payment options for that company's buyers.

Like the other companies, PayPal wins respect from developers on Web Services, API functionality and tools—but to a lesser degree. Support gets a few accolades, but otherwise PayPal's program is nothing to write home about. For this reason, it falls in last place in terms of overall rankings.

In particular, developers tend to be less than satisfied with PayPal's communications, blogs and forum. This is not surprising, considering that the company is less interested in forming a community than providing a solid technical solution.



### PayPal: Length of Integration History

How long have you been integrating your services with PayPal's site?

	Valid Percent	Cumulative Percent
Valid Less than 3 months	26.7	26.7
3 - 6 months	21.7	48.3
7 - 12 months	18.3	66.7
13 - 24 months	13.3	80.0
More than 2 years	20.0	100.0
Total	100.0	

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### PayPal: Percent of Applications Integrated

What percent of your applications are currently integrated with PayPal's site?

	Valid Percent	Cumulative Percent
Valid 1-25%	68.5	68.5
26-50%	25.9	94.4
51-75%	5.6	100.0
Total	100.0	

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### PayPal: Projected Change in Applications Integrated

In the next 12 months do you think this number will:

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	13.6	13.6
Increase more than 30%	13.6	27.1
Increase more than 10%	28.8	55.9
Insignificant increase / Will stay the same	23.7	79.7
Decrease by more than 10%	1.7	81.4
Don't know	18.6	100.0
Total	100.0	

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### PayPal: Degree of Financial Profit

To what degree have you or your team profited financially from integrating with PayPal's site?

	Valid Percent	Cumulative Percent
Valid Not at all	26.2	26.2
Slightly	27.9	54.1
Somewhat	23.0	77.0
Significant	14.8	91.8
Very significant	8.2	100.0
Total	100.0	

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### PayPal: Difficulty of Integrating Applications

Please rate the difficulty of integrating your applications with PayPal's site.

	Valid Percent	Cumulative Percent
Valid Not at all	16.4	16.4
Slightly	29.5	45.9
Somewhat	32.8	78.7
Significantly	9.8	88.5
Very significantly	11.5	100.0
Total	100.0	

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### PayPal: Level of Security Associated with Integration

Please rate the level of security associated with integration with PayPal's online site.

	Valid Percent	Cumulative Percent
Valid Not at all	8.2	8.2
Slightly	21.3	29.5
Somewhat	23.0	52.5
Significantly	26.2	78.7
Very significantly	21.3	100.0
Total	100.0	

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### PayPal: Extent of Downtime Issues

To what extent have you been affected by downtime/outages at PayPal's site?

	Valid Percent	Cumulative Percent
Valid Not at all	41.0	41.0
Slightly	23.0	63.9
Somewhat	23.0	86.9
Significantly	9.8	96.7
Very significantly	3.3	100.0
Total	100.0	

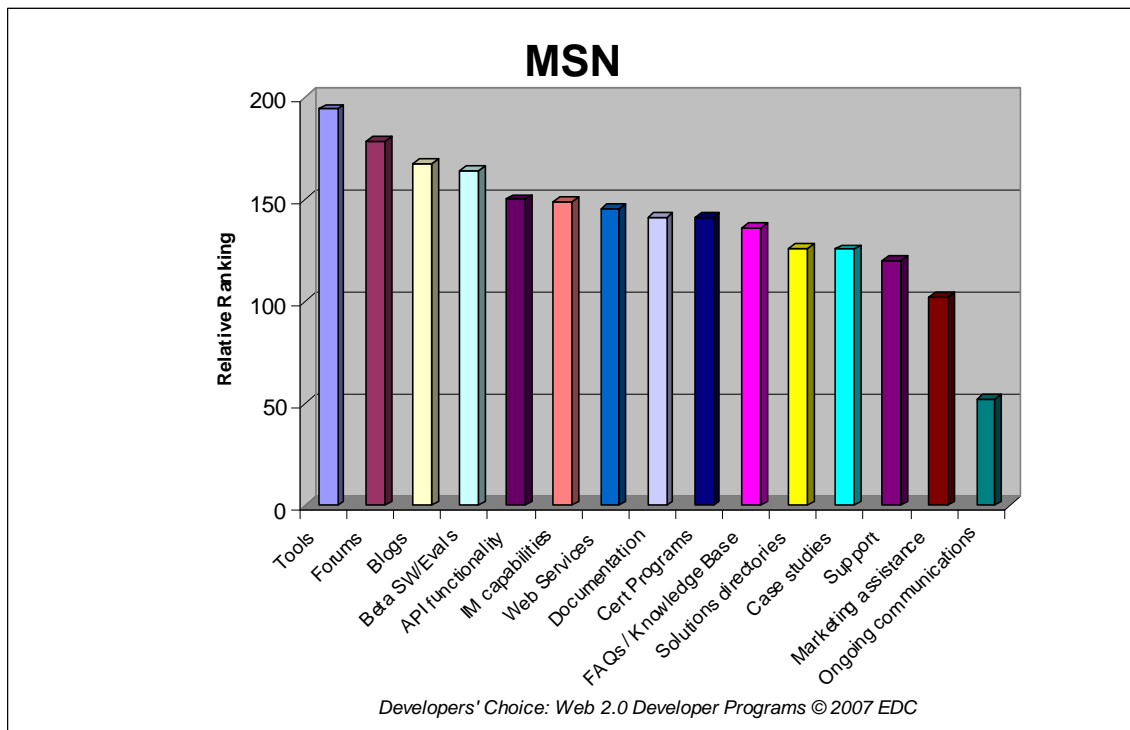
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## MSN

The Microsoft Network (MSN) has been in existence since 1995, making it one of the oldest online vendor communities on the Internet. Today it enjoys some of the highest traffic of any site. The last year has seen a rebranding of MSN to Windows Live, and technical functions on the site have changed, with increased focus being put on services such as search and messaging.

Developers appreciate the tools that they get with MSN, reflecting the broader sentiment of Microsoft's tool superiority in the wider market.



## MSN: Percent of Applications Integrated

What percent of your applications are currently integrated with MSN's site?

	Valid Percent	Cumulative Percent
Valid 1-25%	60.9	60.9
26-50%	17.4	78.3
51-75%	6.5	84.8
76-100%	15.2	100.0
Total	100.0	

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## MSN: Length of Integration History

How long have you been integrating your services with MSN's site?

	Valid Percent	Cumulative Percent
Valid Less than 3 months	18.4	18.4
3 - 6 months	18.4	36.7
7 - 12 months	14.3	51.0
13 - 24 months	8.2	59.2
More than 2 years	40.8	100.0
Total	100.0	

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## MSN: Degree of Financial Profit

To what degree have you or your team profited financially from integrating with MSN's site?

	Valid Percent	Cumulative Percent
Valid Not at all	25.5	25.5
Slightly	17.6	43.1
Somewhat	35.3	78.4
Significant	13.7	92.2
Very significant	7.8	100.0
Total	100.0	

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## MSN: Projected Change in Applications Integrated

In the next 12 months do you think this number will:

	Valid Percent	Cumulative Percent
Valid Increase more than 50%	14.0	14.0
Increase more than 30%	28.0	42.0
Increase more than 10%	18.0	60.0
Insignificant increase / Will stay the same	14.0	74.0
Don't know	26.0	100.0
Total	100.0	

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## MSN: Difficulty of Integrating Applications

Please rate the difficulty of integrating your applications with MSN's site.

	Valid Percent	Cumulative Percent
Valid Not at all	16.0	16.0
Slightly	28.0	44.0
Somewhat	34.0	78.0
Significantly	16.0	94.0
Very significantly	6.0	100.0
Total	100.0	

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## MSN: Level of Security Associated with Integration

Please rate the level of security associated with integration with MSN's online site.

	Valid Percent	Cumulative Percent
Valid Not at all	11.8	11.8
Slightly	17.6	29.4
Somewhat	41.2	70.6
Significantly	19.6	90.2
Very significantly	9.8	100.0
Total	100.0	

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## MSN: Extent of Downtime Issues

To what extent have you been affected by downtime/outages at MSN's site?

	Valid Percent	Cumulative Percent
Valid Not at all	19.6	19.6
Slightly	19.6	39.2
Somewhat	39.2	78.4
Significantly	19.6	98.0
Very significantly	2.0	100.0
Total	100.0	

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## Relative Rankings

### Tools

Commonly acknowledged as one of the most important facets of any developer program, tools and SDKs provide members with what they need to build applications. Tools are generally rated on the basis of quality, but a number of other factors come into play as well when developers think about what makes a good tool. These include ease of download, timely updates, richness of functionality, performance and so forth.

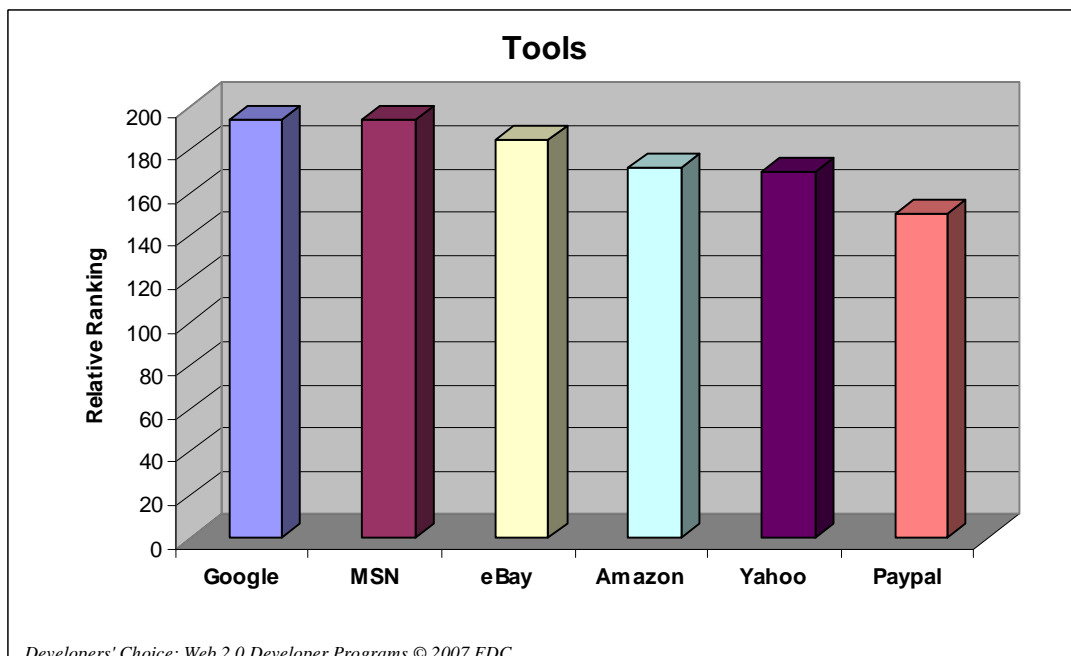
Virtually tied for first place, Google and MSN are regarded as having the best tools. Microsoft's placement here is not difficult to understand, given the overall set of technologies leveraged by this vendor, but here tools are specific to MSN. From Microsoft's site, one has access to a number of SDKs (e.g., Windows Live SDK, Instant Messenger SDK, Virtual Earth SDK).

Google's dominance comes as a result of significant investment in providing enterprise tools for search, collaboration and publishing, and geospatial mapping. Outside of the Google Web Toolkit (GWT), developers are also provided with SDKs for writing applications to the Google Desktop.

In third place, eBay offers developers a "sandbox" test account and authentication token so that they can start building applications and solutions to be included on eBay's directory. Its SDK is designed to simplify integration by abstracting the eBay API, but it also provides other common APIs. A separate version exists for developers seeking to write .NET applications.

On the surface, Amazon appears to offer a rich set of tools. That said, developers apparently have some reservations about them. Of the tools it offers, there are tools for its Web services, for e-commerce and pricing, as well as other areas in which it is trying to innovate. It is worth noting that this is one of the few aspects of Amazon's program that developers really appreciate.

Yahoo! offers developers a choice of environments, from Flash to PHP to Python, but their tools are not regarded highly by respondents. PayPal comes in at the bottom, though the ranking is still fairly positive. PayPal SDKs are available for a range of platforms, from Java to .NET, and promise to simplify the SOAP protocol used in PayPal's Web services.



## Forums

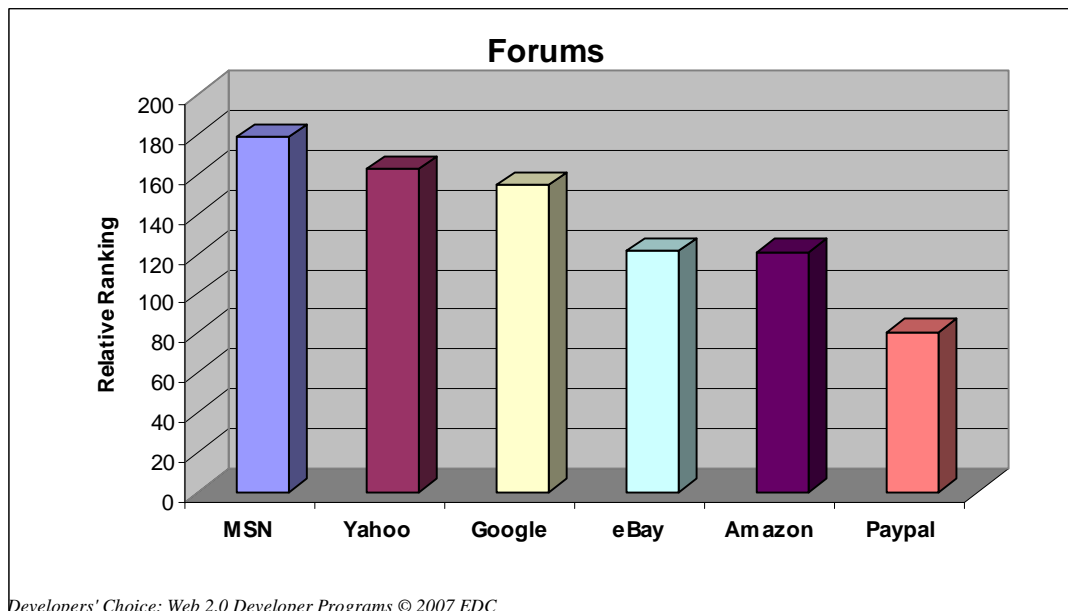
Forums represent an important part of the developer program's communications window and ability to generate community. They also serve to provide users with support and useful information, whether it comes from an engineer working with the vendor or forum members themselves. Forum quality is largely predicated on the size of the community, the activity of the forum, the quality and relevance of the posts (and willingness of members to answer questions), and forum moderation.

MSN is at the top of the list in this area. This site has been around the longest of any of the sites reviewed here and has a substantial community. Furthermore, the MSN forum is linked with MSDN, which is the top-ranked developer program of any IT vendor in the world.

The Yahoo! forum comes in second place, not that it is an integral part of their Developer Network. Instead it refers to Yahoo! Groups, which has discrete segments for discussion of development. Similarly, Google's developer forum is found within Google Groups. Both Yahoo! and Google forums enjoy lots of traffic.

For eBay and Amazon, it's not that they have less of a developer community but that they have less traffic overall. The technical discussions in the forums of these two vendors are more than satisfactory, but simply do not stack up against the front runners.

PayPal is lacking when it comes to a developer forum, but as community is not one of its points of focus, this should not come as a surprise.



## Blogs

Blogs have become an increasingly common facet of developer programs, sometimes giving experts from the company a chance to share their knowledge and sometimes giving the soapbox to members in the developer community. It should be noted, however, that while blogs are everywhere, they are not generally regarded as one of the more important aspects of a program. On the flip side, Web 2.0 are now carrying blogs to a new level and enabling end-users to create their own blog.

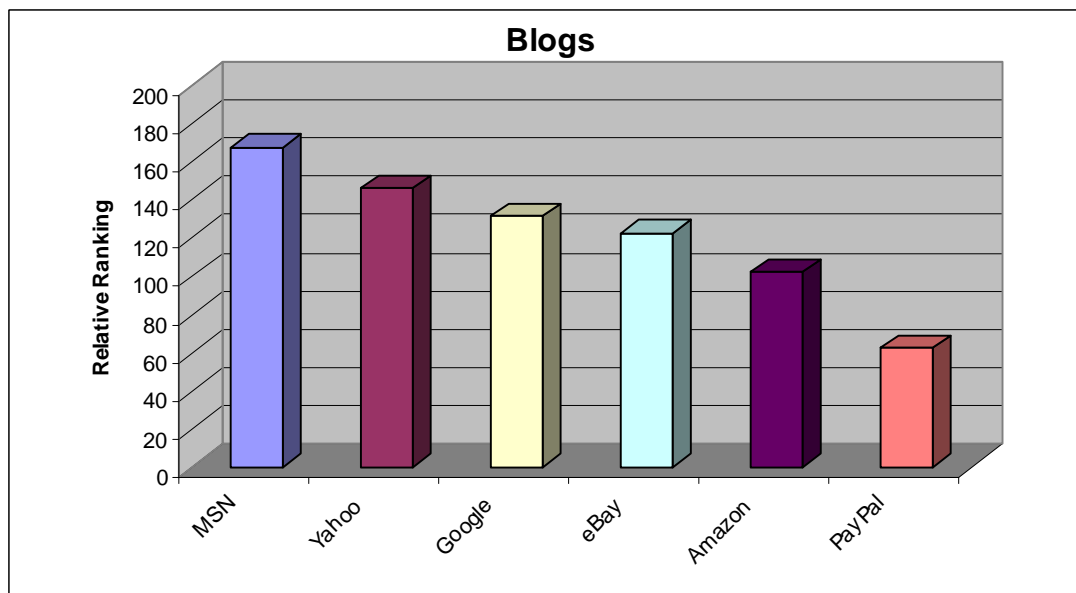
MSN succeeds in letting end-users set up a blog at Windows' Live Spaces (which replaced MSN Live Spaces). This ability, as well as the fact that developers familiar with MSN have the wealth of MSDN blogs at their disposal, helps put Microsoft in the lead in this area.

Yahoo comes in second place with the popular Yahoo! Search blog, moderated by people from that company. It has been around for three years now and is well archived—as well as searchable, of course. On the public side, Yahoo is opening blogs with Yahoo! 360°.

Google also offers an official blog that provides insights into that company's products and technology. Google also offers blog functionality to the public, but recently there have been complaints about people losing customized settings to their pages.

Between eBay and Amazon, the former comes out ahead. eBay Blogs offers connectivity between vendors and buyers, though the company recommends extending them out to friends and family even. Amazon offers blogs to its authors, but there are no easy links to the Amazon Connect program. Once one finds it, one has to log on. Despite being in production for two years, it is still very rudimentary. It does not appear to allow readers to respond to an author's posts, for example.

PayPal occupies an unenviable position on many third-party blogs (mostly hosted by critics of the company), but for its own part does not offer any blog per se. One has to visit external sites linked with the PayPal Developer Network, such as [paypaldev.org](http://paypaldev.org), and hope that their resources suffice.



## Certification Programs

Certification remains an important component to a select group of developers seeking to expand their repertoire and value. It is included in most developer programs and is often offered at events like tradeshow and conferences.

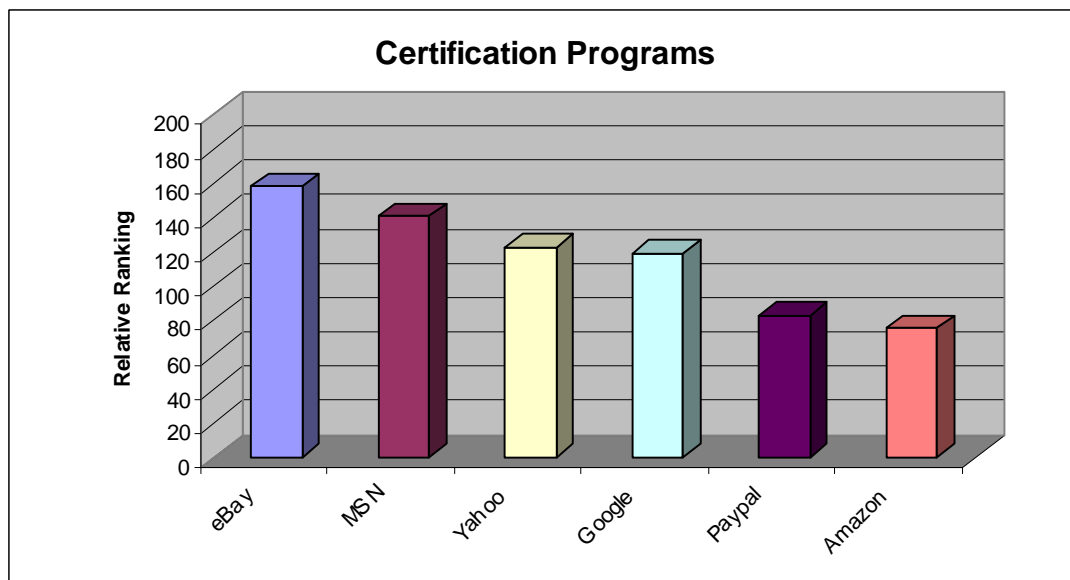
eBay requires developers to submit an application to certification in order for it to use the company's Web Services and make calls against the production API server. Approval allows the application to be granted a higher limit than the standard 10k calls per month. eBay's certification process is simple and straightforward, making it the best rated here.

MSN enjoys the certification programs of the larger Microsoft ecosystem (i.e., MCP), which assure developer quality across the board on a number of technologies. Today the program involves a three-tiered certification process. It comes in second place.

Yahoo and Google are essentially tied for their certification programs. The former involves Yahoo Search Marketing, where the Ambassador level requires certification for revenue share on client billing. The latter offers, for example, certification on AdWords (which is supposed to help when recruiting new clients) or certification to receive a Google Advertising logo.

PayPal offers certification, but only recently. The beta exam only launched in March, 2007. The fact that most respondents were unfamiliar with this resource is certainly responsible for its low rating here.

Amazon does not appear to offer certification, but require developers to sign a licensing agreement before using their Web services.



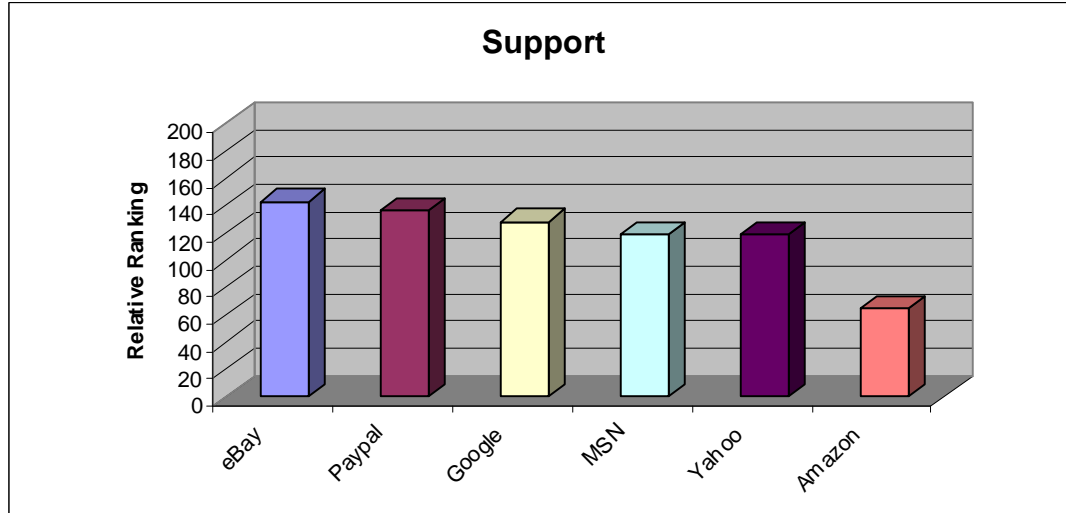
## Support

Support is one of the most important facets of any developer program, as well as any consumer site. As a broad rubric, it includes documentation and FAQs, but most often is understood to mean interaction by phone, chat or email with technical engineers familiar with the technology and program.

eBay and PayPal are considered to be doing the best with support, but still it is worth noting that overall satisfaction levels leave room for improvement. Support requests through eBay are paid, either by the half-hour or as a package for developers launching a site. PayPal provides free support, not only via phone or email, but also through a questions section organized by different categories.

Google support placed slightly ahead of MSN and Yahoo. Google offers help centers for the common user, but also offers enterprise-level support. MSN channels users through a Web form; in the Windows Live Spaces area, users are given FAQs and a place to leave feedback, but little recourse to a live person. The low rating on Yahoo's program reveals room for improvement on their site. Worth noting is their recent implementation of a "suggestion box" to field input from developers.

Amazon support receives a dismal rating. Users report a lack of support altogether, difficult to find phone numbers, lengthy response times (more than a day in some cases by email) and hold times (being put on hold for hours). These are all unacceptable to developers, especially when the technology is complex.



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## Documentation

One of the most important aspects of any program for developers is the degree to which companies provide documentation for their technologies. In many cases, companies even provide documentation on their partners' software or hardware (e.g., mobile phone vendors' documentation of J2ME).

eBay leads the way in developer satisfaction with their documentation. Not only do they provide a simple to understand introduction to their process, replete with tutorials and definitions, but their APIs are neatly organized between XML, SOAP, and REST and developers are given access to documentation to their SDKs for .NET or Java. There is also a popular forum dedicated to the subject where users can submit notifications, errors and sundry feedback.

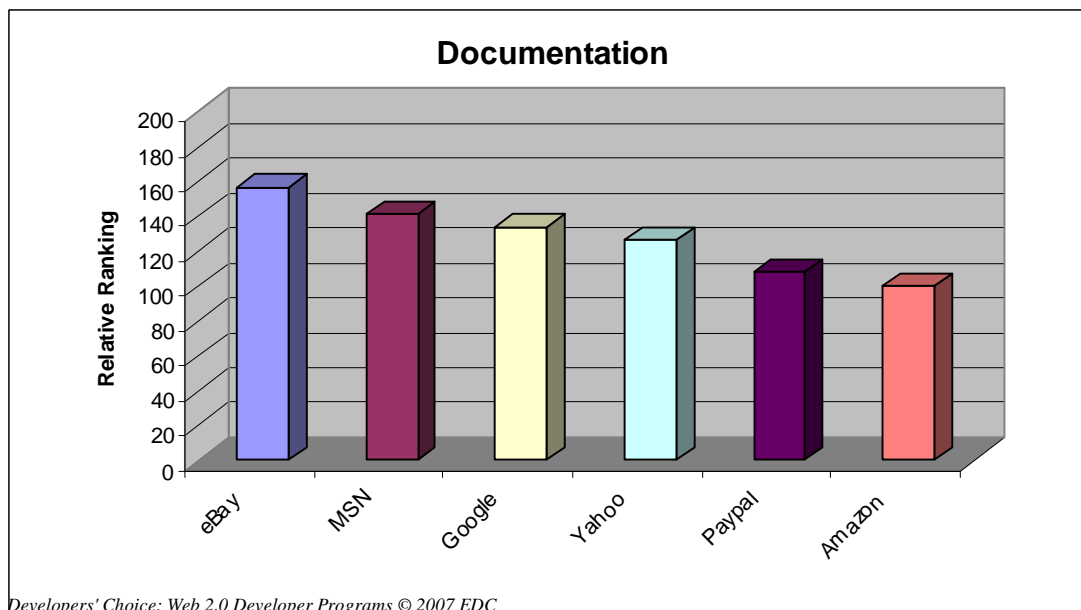
Microsoft's documentation for MSN is to be found within the larger MSDN site. If nothing else, it is comprehensive. Aside from eBay, it is the best rated resource in this area among the various companies. In this site, one finds an extensive library of information on tools and Web development, languages and .NET, as well as popular topics like mash-ups.

Google has a Developer Knowledge Base, in which articles and tutorials explain larger topics. For information on specific APIs, one needs to navigate to that area to get the Developer Guide. For example, the Google Maps API has its own rich documentation resource. The Google interface is simple if somewhat sparse.

Yahoo's Developer Network documentation is not identified at the top level, but requires users to navigate into it via the various areas and technologies where they are working (e.g., JavaScript, .NET). That said, once they are in the section there is a list of "how to" documents, tutorials and articles across a variety of areas.

PayPal does not score high on documentation, but that is not because it doesn't exist. It is a bit difficult to find and, once one does find it, it is only available in PDF format. The API references were last updated more than a year and a half ago.

The technical library also recently moved on Amazon's Developer Connection site. For documentation, one must search between the various services. For certain of these, there are serious gaps between updates. There is a review feature for the various types of documentation, but it remains largely unpopulated.





## Beta Software and Evaluation Copies

Beta software and evaluation copies of software are a perennial favorite of developers, be they in the adoption phase or looking to increase their use of a vendor's offerings.

Other reviews of Microsoft's developer program often highlight the company's success in this area—and the same applies here with MSN, putting them in the lead. This degree of satisfaction can be explained by the sheer number of available downloads and the immense resources Microsoft has at its disposal to continually push the envelope with new software.

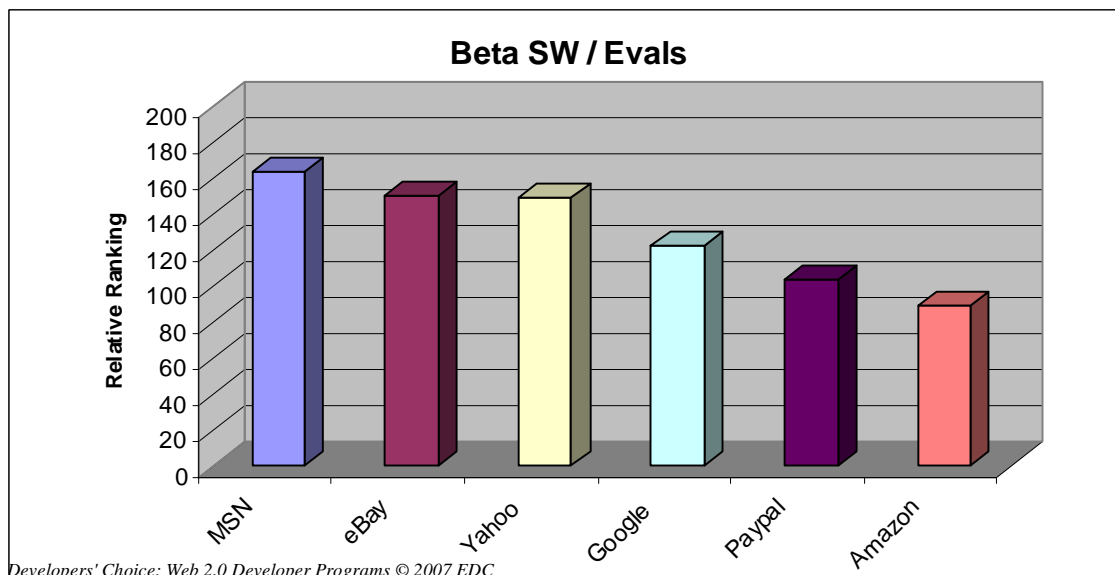
eBay has offered beta versions of its SDKs, but it also gives a helpful roadmap of future products. This section of the site provides developers with the opportunity as soon as possible to access evaluation copies of new technologies.

Yahoo does release beta versions of software and components for its developers, soliciting input on the API before further changes are locked out. Yahoo appears to do a good job of identifying these components so that developers are put on notice that modifications to the API may later be made that could prevent their applications from being backwards-compatible.

Google's beta software offerings do not exist per se, but fall into the category of Open Source Projects which include libraries and tools that are continually being patched.

Beta software is not immediately visible on PayPal's site, but when one explores the Third-Party Solutions area there is a list of possible solutions available for trial download.

Amazon's Developer Connection appears to be lacking in its selection of beta and evaluation software.



## Case Studies

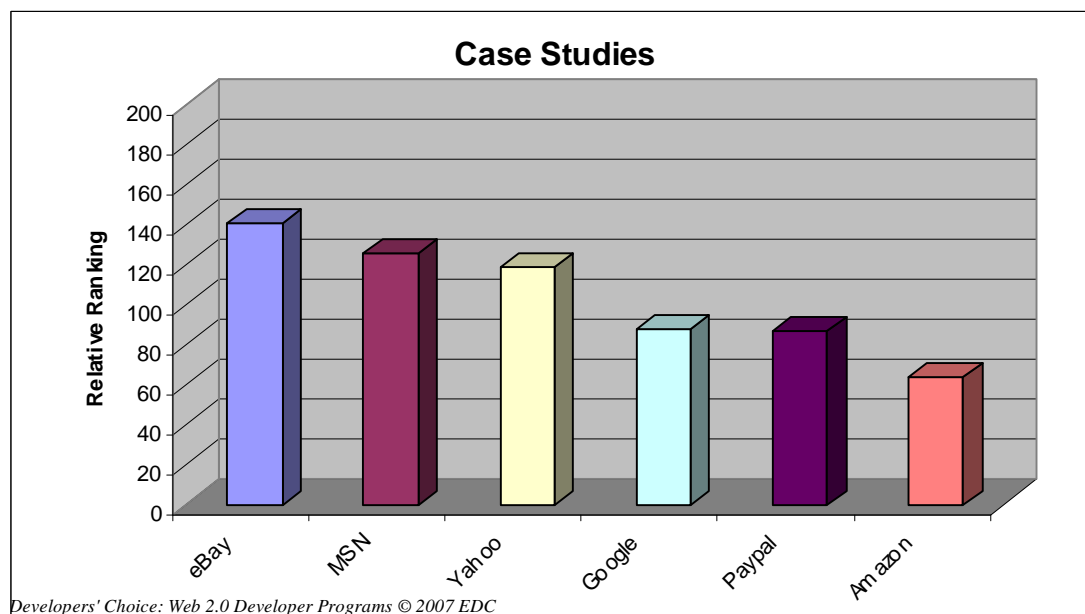
Case studies are meaningful for developers seeking to understand what types of applications have been successful in the past.

eBay again rates highly, with respondents able to access a number of “success stories” that feature photos of the developer, their company and industry, and comprehensive explanations of what worked to drive their business. MSN also scores well in this area, leveraging Microsoft’s proven model of showcasing star developers and their solutions.

Yahoo’s case studies go under the name of Working Examples, with applications rated and reviewed by a community of peer developers. Yahoo also offers a list of Editors’ Picks to give an idea of what applications it finds to be the most exciting.

Google and PayPal are found to be somewhat lacking in their selection of case studies. For the former, case studies are only found for very specific technologies (i.e., AdSense), with only a couple developers featured. For the latter, one must be satisfied with half a dozen ‘featured developers’ (who actually charge for advice and solutions).

Amazon falls to the bottom of the list in terms of case studies. One would have to hope that they would be included in the ‘Browse Solutions For...’ area of the site, but this is not a given nor is it clear on initial review of the different categories (e.g., businesses, developers).

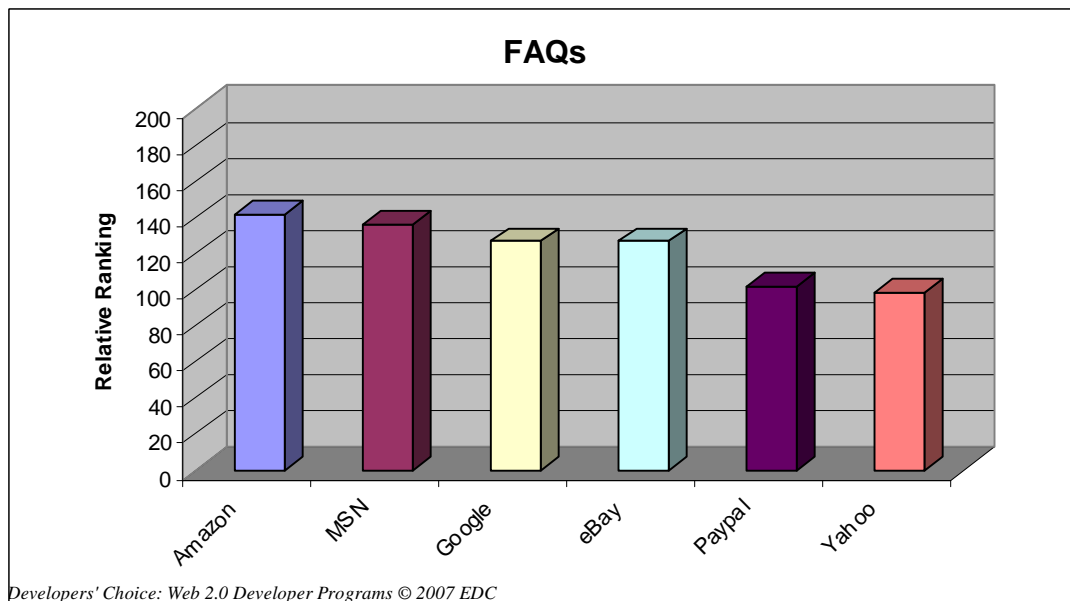


## FAQs

Often developers want to get their questions answered, but would rather find the answer themselves rather than calling or emailing support. The FAQs section of a program is a very helpful resource in this regard, though their quality can vary largely depending on the company's sophistication and the user base (and what kind of questions they have asked).

MSN offers very specific answers in their FAQs section, ranging from downloads and installation to specific error messages. Amazon does well in terms of FAQs, with separate sections for its various technologies. The questions are well organized and summarized, allowing developers to come up to speed quickly on the nuts and bolts of the program.

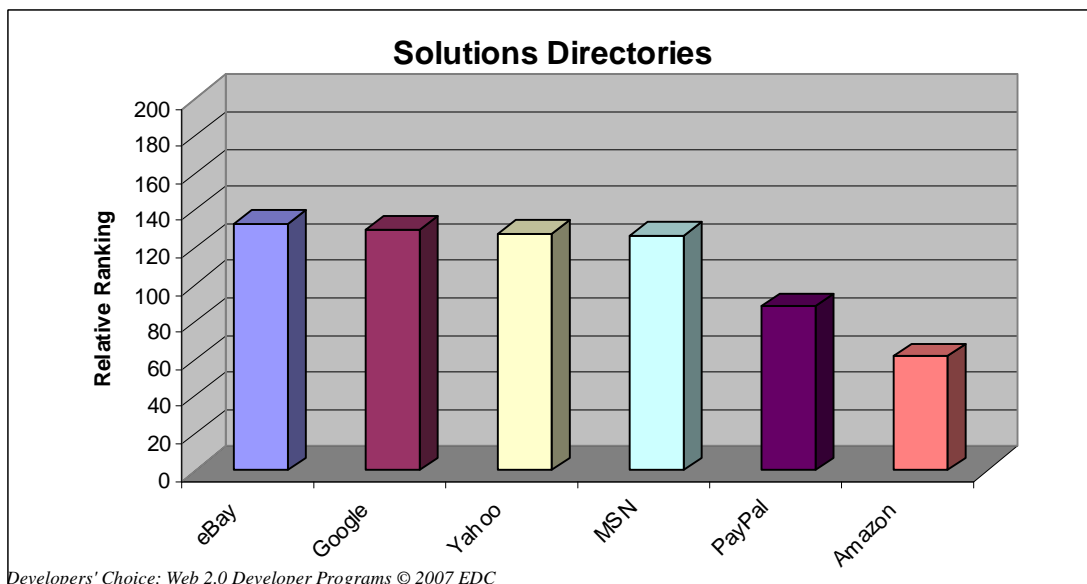
Google and eBay are basically tied in this area, while PayPal and Yahoo lag behind. Yahoo has an extensive list of questions, but users are apparently unsatisfied with the answers they give.



## Solutions Directories

Solutions directories allow users to explore the contents of a website by category, like a book index. As a means of navigating the program, a clear directory goes a long way towards facilitating usage and access of information

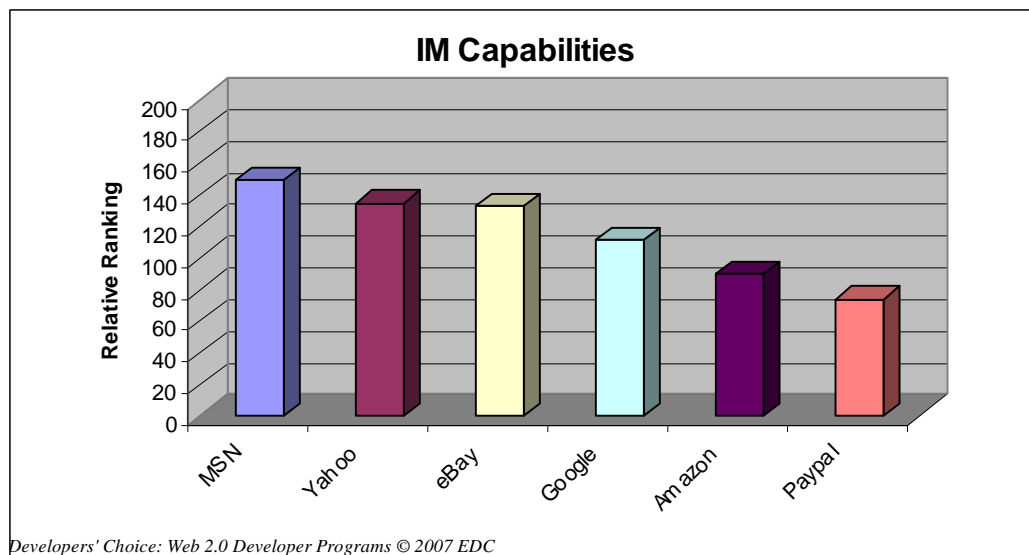
Across the board, most of the companies reviewed here have satisfactory directories in place. This is to be expected of major corporations with strong organizational expertise. PayPal and Amazon are the exceptions to this rule, however, with the latter failing in a significant way. This is somewhat surprising, considering that Amazon offers the option to browse by solution or by service. What many developers have a problem with—and this is evident on the forums—is the directory structure (and lack of renaming within it) of Amazon's Simple Storage Service (S3).



## IM Capabilities

Increasingly, Web 2.0 companies are being compelled to enter the realm of instant messaging. For some, like MSN, this has been a core component of their online presence for a long time. Google entered on the scene much more recently, but has been able to capture healthy market share among end users with their IM. Amazon tops the ranking, however, with such features as being able to select someone on the buddy list and automatically finding that person's "wish-list". This plug-in works with other IM systems, such as Yahoo. Yahoo instant messaging does not score as many points with developers, however, despite the functionality of its newly launched IM 2.0.

eBay and PayPal score at the bottom because their relative lack of focus in this area.



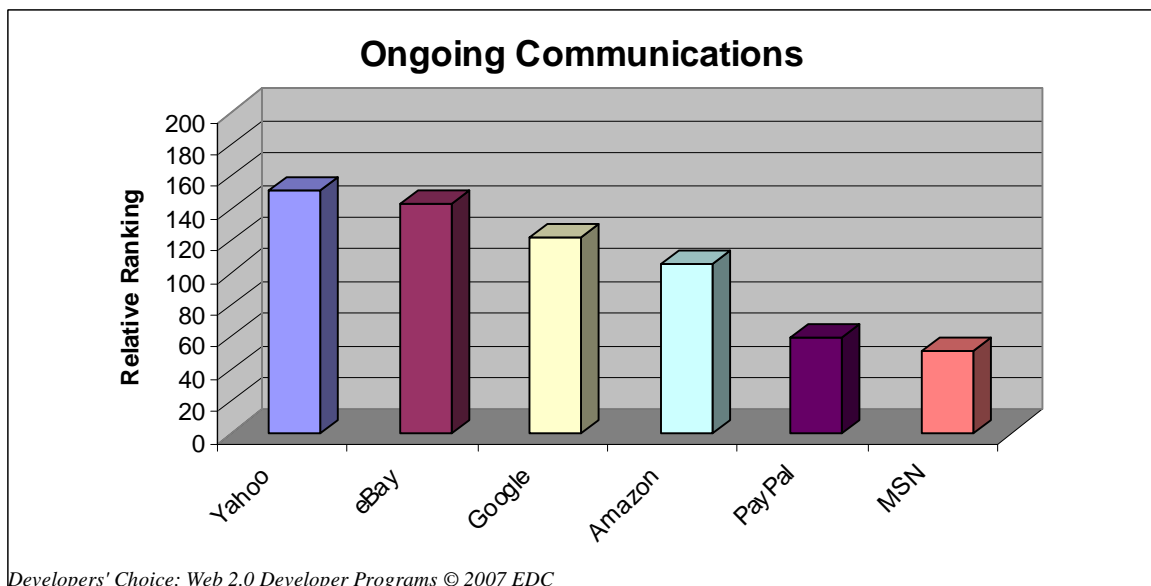
## Ongoing Communications

Ongoing communications play an important part in the developer program for reducing churn and allowing for continued value on both sides, the company and the members of the program. Communications can cross a variety of media, but are most commonly associated with mailing lists and the email channel.

Microsoft succeeds in maintaining touch points with its developer base. This is not only evident with MSN here, but also in terms of its larger platform ecosystem with a long history of migrating users across versions of Windows.

Amazon also ranks high on the list for ongoing communications, mobilizing large numbers of developers but also maintaining touch with them through the growth process. Amazon does well to focus on communication with this base, as they stand to benefit from the strong relationships with innovation and creativity brought to the table by developers.

Google is not perceived to be the best in terms of ongoing communications, but this can partially be explained by their level of growth over the past few years. In any case, Google does better than eBay and PayPal. The low rating of eBay is interesting here, especially considering their success across a number of other areas.



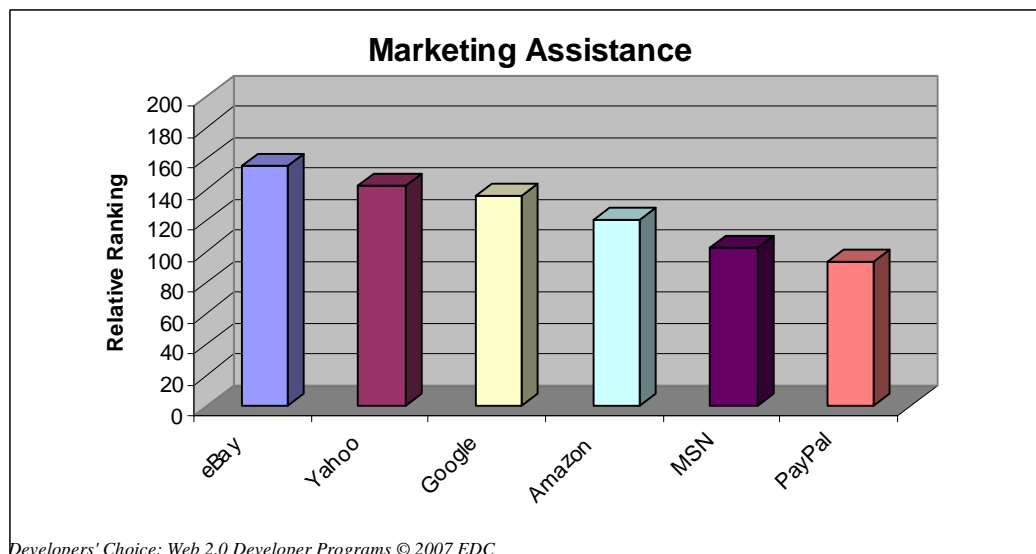
## Marketing Assistance

Despite the fact that developers tend to be less interested in marketing than other aspects of a developer program, even when it adheres to their own interests, for a segment of them it can make the difference between financial success or not—or whether they will integrate with that company's technology or not.

Microsoft is gauged to provide the most comprehensive marketing assistance. It enjoys years of experience and impressive resources through MSDN to dedicate to this area. MSN marketing also offers search advertising functionality that reaches a wide audience. Yahoo also prioritizes marketing for third-parties looking to integrate with their Search Marketing management technologies and leverage an existing marketplace. Google AdWords does the same thing as MSN and Yahoo for people looking to display ads on an existing network or add advertising to their own site with the promise of revenue sharing, but Google places lower on the list of developer satisfaction. It is important to remember that developers may not only be interested in advertising opportunities, but making money with the APIs provided by companies.

Amazon Merchant and Amazon Marketplace provide venues where developers can go to make money if they have things to sell. In other words, Amazon covers the B2B and B2C dimensions. Amazon offers further co-marketing opportunities through the AWS (Amazon Web Services) directory of showcased applications. That said, developers have yet to fully appreciate these levels of marketing assistance.

PayPal and eBay are found at the bottom. Considering that financial transactions are at the heart of both of these companies, they clearly need to improve their message and publicly work on facilitating developers seeking to profit by writing applications that will help their ecosystems to grow.



## Web Services

The functionality of Web Services comprises the backbone of the Web 2.0 companies reviewed here.

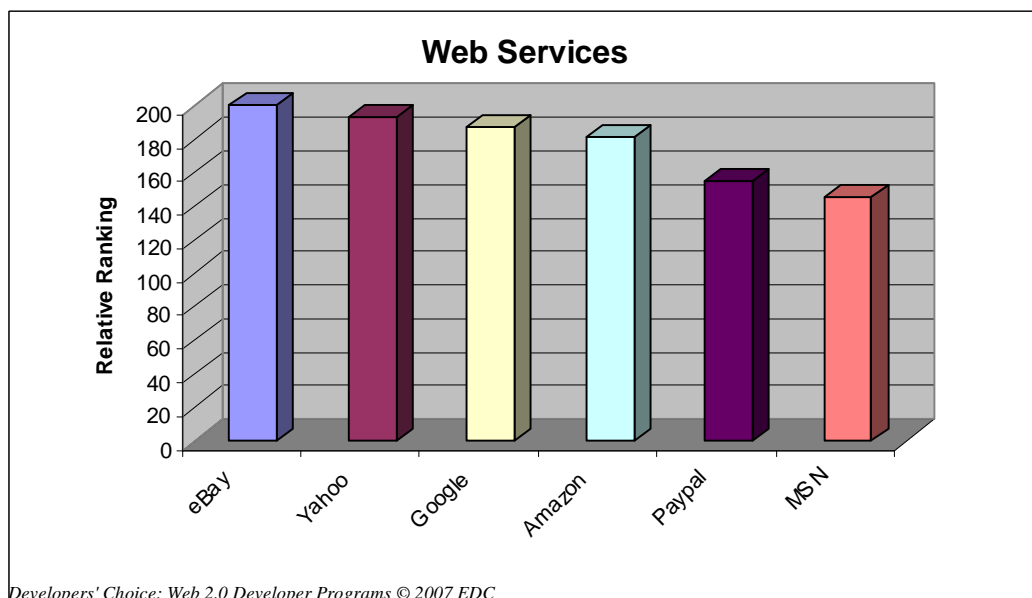
Microsoft receives the best marks for its Web Services technology. This status demonstrates both technical sophistication with .NET Web Services solutions as well as the loyalty of developers in the Microsoft ecosystem. In close second is Google, which is opening up a new dimension of functionality to developers in their applications. With new models of development shifting the way in which information is being presented, these two companies are increasingly being put head to head.

Amazon scores impressively on the basis of its SOAP-based Web Services platform. This success has been recognized by large vendors in the IT space as well as industry analysts, and developers are in agreement. Amazon can be commended in particular for leading the way with innovations in this area, including the Elastic Compute Cloud (EC2). It is important to remember that Amazon and Google were the first ones to offers their Web APIs to developers (in 2002).

Yahoo lags behind slightly, but still garners positive response from developers used to working with their Web Services. Yahoo is also constantly expanding their core technology in the direction of new applications. Most of Yahoo's Web services are REST-based, a technology that is not as popular with developers.

PayPal has been criticized on the basis of its Web services for requiring users to set up an account (as opposed to Google Checkout), but aside from that aspect it gets heat for still conducting transactions through a synchronous function-call API (rather than an asynchronous callback system). PayPal also faces the limitation of only working with U.S.-based merchants.

eBay receives relatively poor marks for its Web services, with criticism including experiences with responses timing out (excessive load) any a litany of technical issues (see eBay's Developer Forum for details). While eBay has room for improvement, though, its clear success in other areas still has it expecting significant growth and integration going forward.





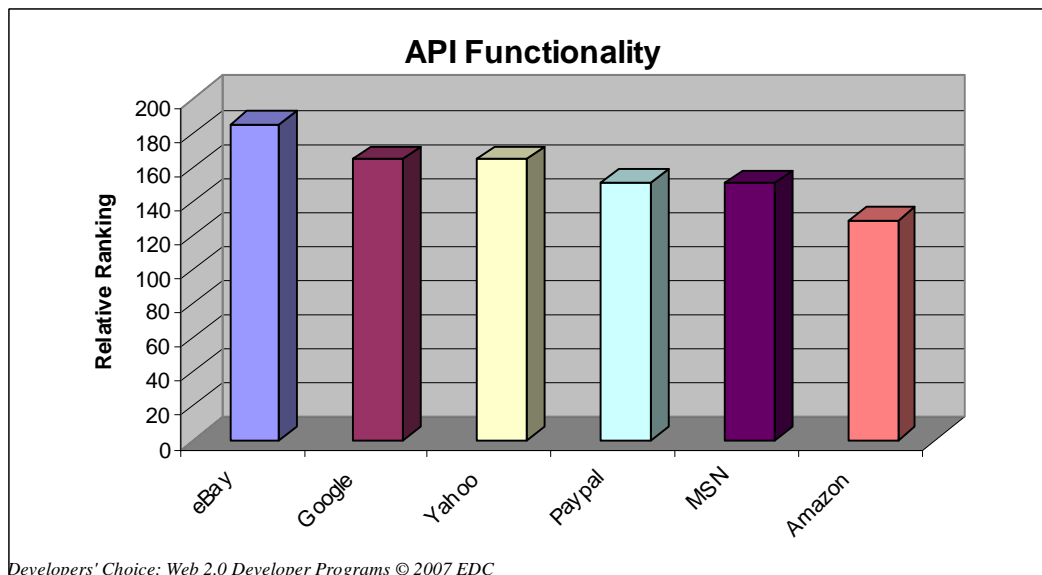
## API Functionality

The success of Web services depends largely on the functionality of the APIs given to the developers looking to integrate with them. Yet this is not the only component behind Web services (e.g., direct interfaces with databases) and APIs deserve to be looked at on the basis of their own merit, especially when considering Web 2.0 companies.

MSN via Live.com offers an open API which encourages developers to build gadgets for the platform (that operate on both the Web and the desktop). By contrast, Google's gadgets (or 'modules') are entirely Web-centric. Further posing a problem for developers working with Google is that company's decision to stop issuing API keys.

Both Yahoo and Amazon offer incredible functionality with their APIs. For example, the former company most recently extended the API and functionality for its core application of Yahoo! Mail (which has close to half a billion users). Amazon's API provides developers with details of products, allowing developers to integrate into their websites the descriptions and features for each item.

PayPal and eBay provide acceptable APIs, but clearly their lower marks in this regard explain the decreased performance in Web services noted on the previous page.



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