Evans Data Corporation
EDC

Developers' Choice

IDEs – Professional Version

Definitive Rankings of the Top 11
IDEs by Over 1,200 Developers

IDEs – Professional Version

Overview

"Eclipse is well on its way to becoming one of the most popular IDEs for any language.."

Abstract and Methodology

In Spring 2006, Evans Data Corp conducted primary market research on IDEs, interviewing over 1200 developers worldwide and asking them to rate the top IDEs. Developers only rated the features of those IDEs that they had used. They were asked to rank sixteen different features commonly found in IDEs. Each feature could be ranked as "excellent, "very good" "adequate", "needs improvement" or "NA". During processing, the first four rankings were assigned a numerical value according to their relative significance. The last value ("N/A") was discarded. Values were then combined to produce a score for each element for every IDE and also for an overall total score.

The top 11 IDEs ranked were:

> Adobe/Macromedia Studio 8
> Borland Delphi
> Borland JBuilder
> Eclipse
> IBM Rational Application Developer
> IBM WebSphere Studio
> Microsoft Visual Studio .NET
> NetBeans
> Oracle JDeveloper
> Sun Java Studio
> Sybase PowerBuilder

Features and capabilities rated were:

> Compiler/Interpreter
> Debugger
> Editor
> Make/Build Functions
> Documentation
> Application Modeling Tools
> Web Design Tools
> Sample Applications
> Profiler

Overview Cont'

Compiler Performance
Performance of Resulting Applications
Ease of Use
Ability to Integrate 3rd Party Tools
Availability of 3rd Party Tools
Quality of Technical Support Options
Size and Quality of Developer Community

In addition, developers were asked to rate the IDEs based on how well suited they are for creating a particular type of application (server-centric, desktop, thin-client, rich-client, and embedded systems).

The following pages describe the overall relative ranking of the IDEs by their own users, the market share for each of the IDEs and also the rankings for each IDE according to the category being assessed, as well as a profile for each IDE expressing their strengths and weaknesses.

The Enterprise version of this survey also profiles each IDE by major geographic region, as well as provides a profile for each of the IDE's users, share projections and growth projections. Please ask your sales rep for information on the Enterprise version of this study.

IDE Overall Usage

This study examines developers' satisfaction with the IDEs and toolsets that they personally use. Only those developers who use a particular IDE were asked to rate it, thus the focus of this study is on the quality of the IDEs and their supporting toolsets rather than market share. However, market share and the quantity of the IDEs being used is always an important factor in both the adoption and the evolution of the toolset.

The table below shows the number of developers who said they use each of the IDEs in the list. Other IDEs were included in the list but had fewer than 35 individuals citing them. Developers could select as many IDEs as they wished, and so the percent of cases (individuals) will add up to more than 100%.

Microsoft Visual Studio continues to be the most used IDE anywhere although Studio 8 shows surprising strength in the APAC region…

Microsoft Visual Studio continues its long-standing reign as the most used IDE anywhere. For many years Microsoft Visual Studio has dominated the development tool scene, both because of the huge installed base of Windows, but also because of the world-class quality that Microsoft devotes to its tools. Microsoft has always recognized the strategic importance of developers, and has spent significant resources on producing excellent development tools. Visual Studio.NET is no exception. Visual Studio's dominance is clear across geographical regions, though it is stronger in North America than either APAC or EMEA.

Adobe's acquisition of Macromedia gave it a very strong IDE with a solid base of web developers. With Dreamweaver, Flash and other tools for web development, Studio 8 has a good following and bright prospects for future market share growth. The suite wraps together an animation tool, Flash 8; a Web design application, Dreamweaver 8; and a graphics editor, Fireworks 8. Also included are the PDF maker FlashPaper 2 and the Web site manager Contribute 3. Studio 8 shows surprising strength in the APAC region

The other IDE with a major following is the Eclipse project. More of a community than a planned and deliberately architected IDE, Eclipse is the juggernaut that is taking the development world by storm. Eclipse is the most popular Java IDE right now and is well on its way to becoming one of the most popular IDEs for any language. Though there may be some lack of satisfaction with the IDE and toolset itself, this is related to the evolving nature of Eclipse and the OSS community and developers are nonetheless embracing Eclipse worldwide.

IDE Usage - Worldwide	Pct of Resp	Pct of Cases
Microsoft Visual Studio .NET	31.7	59.8
Adobe / Macromedia Studio 8	11.8	22.2
Eclipse	11.2	21.2
Borland Delphi	7.6	14.3
Sun Java Studio	6.2	11.6
NetBeans	4.6	8.6
Borland JBuilder	4.5	8.5
Oracle JDeveloper	4.0	7.6
IBM WebSphere Studio	3.5	6.6
IBM Rational App Developer	2.5	4.8
Sybase PowerBuilder	1.9	3.6

Compiler / Interpreter

The compiler, or the interpreter in the case of interpreted languages, is the heart of the toolset that comes with an Integrated Development Environment. It is usually considered first in the selection of an IDE and arguably has the most impact on both the desirability of the IDE itself as well as on the applications the developers create.
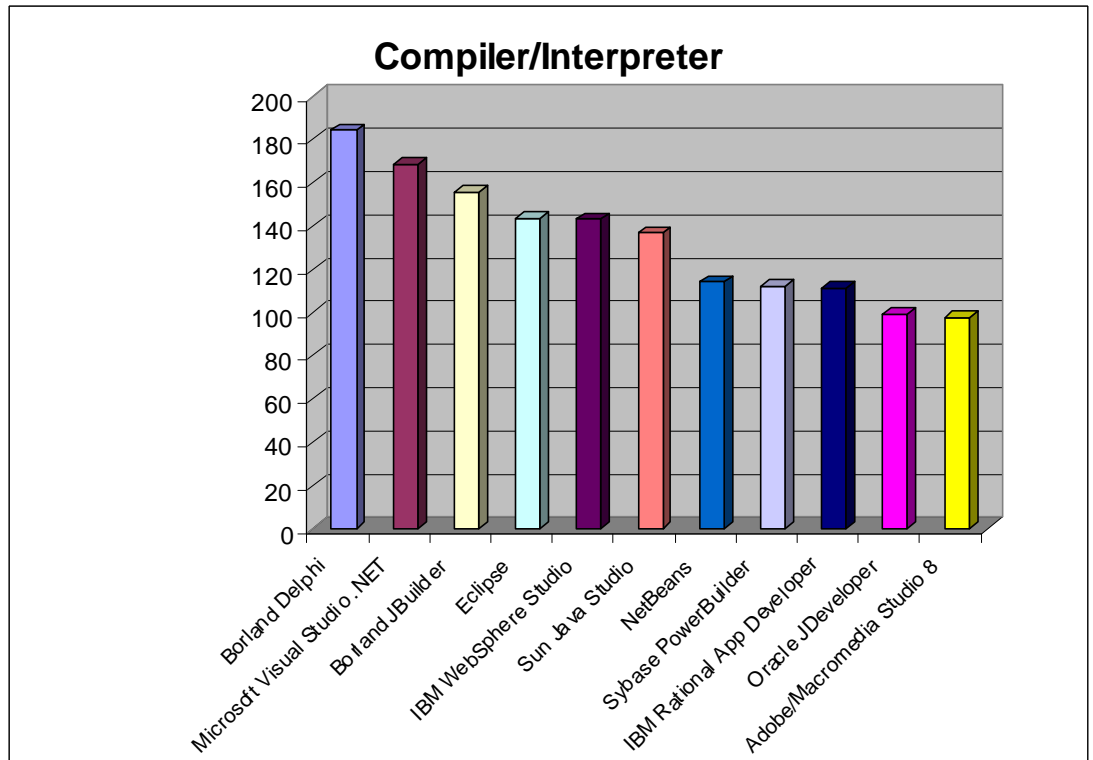
Compiler / Interpreter	Relative Ranking
Borland Delphi	184.4
Microsoft VS .NET	168.7
Borland JBuilder	155.6

Since its inception, Borland has been noted for the excellence of their compilers, and that reputation is still obviously well-earned today. It is no accident that Borland's Delphi not only topped all the other tool makers as far as satisfaction with the compiler goes, but that it also got the best ranking for both speed of the compiler and performance of the resulting applications.

".. It is no accident that Borland's Delphi not only topped all the other tool makers as far as satisfaction with the compiler ..."

The compilers that ship with Microsoft's Visual Studio.NET also got very strong ratings from its users. Microsoft, of course, has been in the tools business since Bill Gates and Paul Allen released a version of BASIC for Altair computers when the company was first starting up in 1975. BASIC later morphed into Microsoft BASIC and finally evolved into a whole family of languages and tools. The quality that Microsoft insists on in their tools is reflected here by the high marks that Visual Studio.NET users gave their product.

Note that Eclipse got good rankings for the compiler. As we see in the profiles, this was the best liked feature in the Eclipse IDE – the most important part of any development environment, Eclipse has a sold core.

Debugger

Debugger	Relative Ranking
Borland Delphi	131.5
Microsoft VS .NET	120.7
Borland JBuilder	119.0

A debugger is just as important as a compiler since no developer writes a perfect program. All programs must be debugged, and this is usually an iterative process. The debugger that ships with most IDEs are source-level or symbolic debuggers. At its most basic function, the debugger runs with the applications and stops on the problem line when the program crashes, thus making it easy for the developer to identify and fix the problem. Most debuggers that ship with these IDEs, however, are more sophisticated than that and include features such as the ability to single step through each line of code, set breakpoints in the code, set conditional breakpoints and other capabilities.

"Once again, Borland shows its roots through the excellence of its tools."

Once again, Borland shows its roots through the excellence of its tools in both Delphi and JBuilder. Not only do their users value the debugging tools that ship with their IDEs, but they also make available a thread debugger which helps with debugging complex multi-threaded applications.

Microsoft's powerful debugging tools have a heritage that dates back to the CodeView debugger of the early nineties. One of the most popular debuggers of all time, CodeView's descendants shows the excellence of its line with full featured debugging with full symbol and source integration, remote machine debugging, and multiple watch windows, threads, call stack, and modules. Microsoft's Visual Studio debugger supports both .Net and Windows.
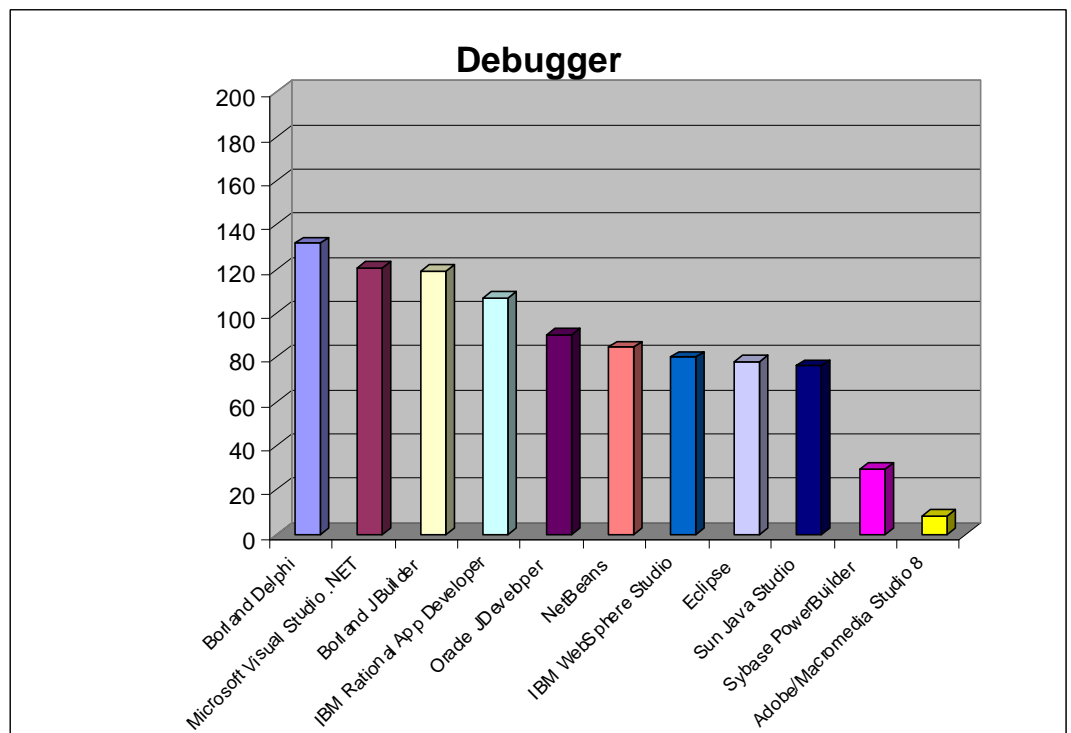
Editor

Editor	Relative Ranking
Microsoft VS .NET	159.9
Eclipse	138.2
Borland Delphi	131.2

Of all the tools that ordinarily accompany an IDE, there is none that inspire as much loyalty or lack thereof than the editor. Why is this? The answer is obvious. The editor is the tool that developers spend the most time with – though a few might argue that they spend as much time with their debugger. Developers become very attached to their editor, so much so that they will often integrate their favorite editor into an IDE rather than use the one supplied.

Any text editor can be used to create code, however source code editors have special features built in to help with the editing of source code such as color syntax highlighting, or auto complete mode and often are designed to be able to also run a debugger or compiler and streamline switching between them.

Although Microsoft's editor garnered the best scores, the Eclipse editor in second place is noteworthy. The Eclipse Visual Editor project is a vendor-neutral, open development platform supplying frameworks for creating GUI builders, and extensible tool implementations for Swing/JFC and SWT/RCP. In particular, the Visual Editor Project intends to be useful for creating GUI builders for other languages such as C/C++ and alternate widget sets, including those that are not supported under Java. But this isn't the only editor available for Eclipse. Several other plug-in editors exist that provide color coded syntax highlighting, cascading style sheets and other features.
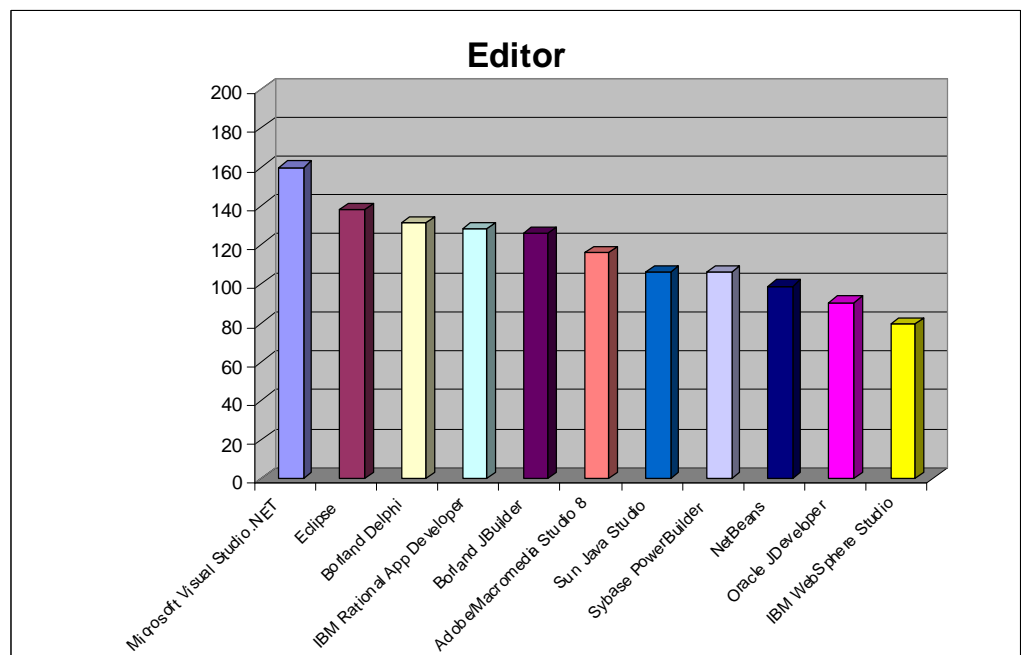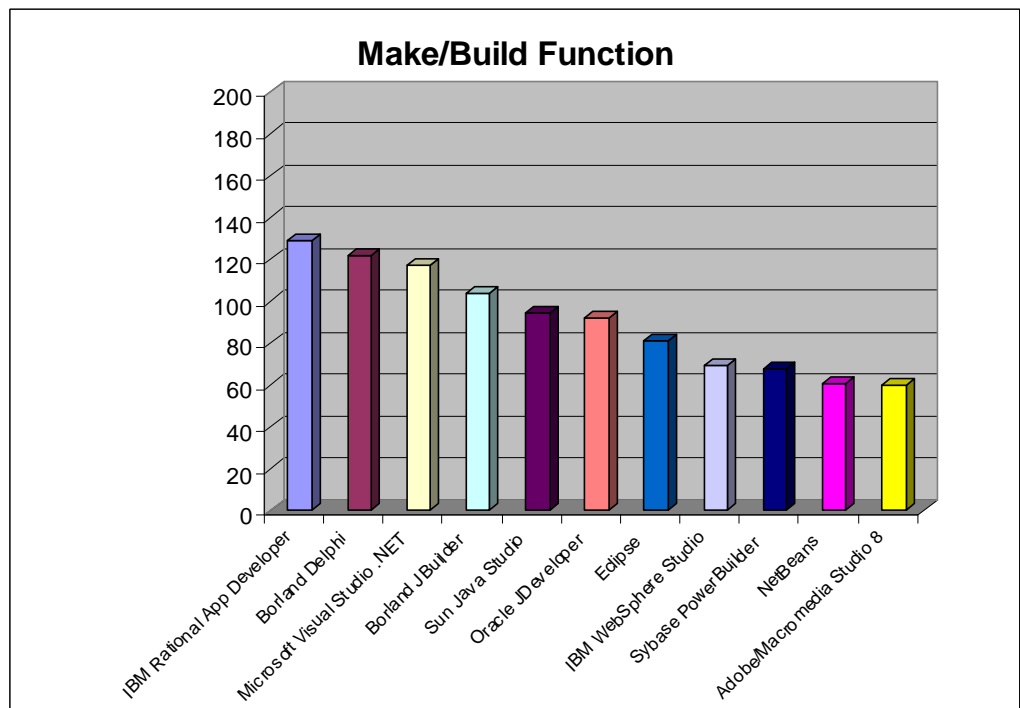
Make/Build Function

Make / Build Function	Relative Ranking
IBM Rational Developer	128.9
Borland Delphi	121.8
Microsoft VS .NET	117.5

The original make file is a utility that automates the process of converting files from one form to another, doing dependency tracking and invoking external programs to do additional work as needed. It was originally used with UNIX and it and its variations are very widespread. Developers have been using make for a long time in the process of building their applications. Make-like tools are inherently shell-based -- they evaluate a set of dependencies, and then execute commands not unlike what you would issue in a shell. Thus vendors can easily extend these tools. Consequently, a small industry has grown up for build automation tools.

Build automation tools are available commercially and as Open Source tools and most can be integrated into IDEs or certainly used alone. ANT, the Open Source build tool from the Apache Project is especially popular. Eclipse has excellent integration with ANT.

IBM's Rational Application Developer won the best marks for the available make/build utility. ClearCase, the much lauded Rational change management tool can be integrated with ANT to provide a sophisticated and efficient build process tool which can shave considerable time off the build process. These tools allow you to automate a process that captures pertinent information about each test suite run, generates an attractive report, and e-mails the report.

Make/Build Function

Documentation

Documentation	Relative Ranking
IBM Rational Developer	63.9
Microsoft VS.NET	63.0
Sun Java Studio	53.3

"The top two, IBM's Rational Application Developer and Microsoft's Visual Studio, are really the "Porsches of the IDE world…"

Documentation has always been a favorite topic of complaint for IDEs and for any other software product. Logically there is no reason why the documentation should always be such a problem, but it nonetheless usually is. The reason for this may be more human than technical. Everyone is exposed to the help system and everyone has an opinion about how things should be said and how they should be presented. With an extensive help system there is plenty of room to present information in a way that not everyone will like

Note that none of the IDEs in this study were rated very high on documentation. All of the graphs in this study have been drawn with the same scale so that the overall difference can be seen.

The top two, IBM's Rational Application Developer and Microsoft's Visual Studio, are really the "Porsches" of the IDE world and should certainly have documentation that has at least been thoughtfully designed and executed. The others have declining levels of satisfaction when it comes to the documentation.

Probably the most notable thing about this graph is not the top IDEs, but rather the poor showing of Eclipse. That the Eclipse Open Source project would provide the least satisfaction level probably has to do with accountability. For each release of Eclipse the community provides five volumes of documentation – the Workbench User Guide, Java Development Guide, the PDE Guide, the Platform Plug-in Development Guide and the JDT Plug-in development Guide. Though each release has had all of these, apparently the quality of the documentation is lacking. Compared to NetBeans, the other OSS in this study, Eclipse is way off.


Documentation
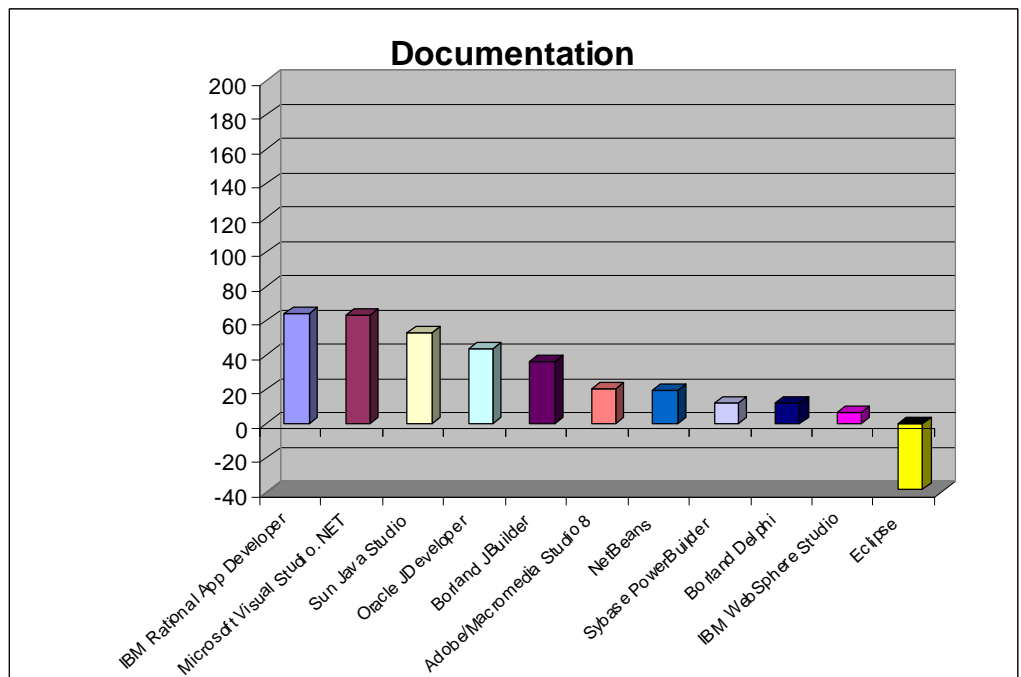
Application Modeling Tools

Application Modeling Tools	Relative Ranking
IBM Rational Developer	129.0
Oracle JDeveloper	108.2
Sybase PowerBuilder	87.7

For the last ten years, Rational has owned the modeling tool market. Indeed, in the early nineties it was James Rumbaugh and Grady Booch, two Rational employees, who united their two methods for modeling objects into one and so began the Unified Modeling Language (UML). UML was completed and adopted by a team from multiple companies, but the impetus and origin came from Rational. IBM, of course, acquired Rational several years ago and consequently, it's no surprise to see that IBM's Rational Application Developer IDE showed the highest level of satisfaction among its users for modeling and design tools.

Traditional modeling tools allow an architect to create a visual model of how a complex application will work, outlining components, calls, and other functions and thus providing means to optimize and provide stability to applications.

Oracle JBuilder also got good marks on its modeling tools. Data modeling tools have long been a part of complex databases. Note that Eclipse's modeling tools have not yet reached the point of satisfying developers.

The fact that NetBeans and Eclipse did poorly points out an opportunity for vendors wishing to launch new plug-ins.


Application Modeling Tools
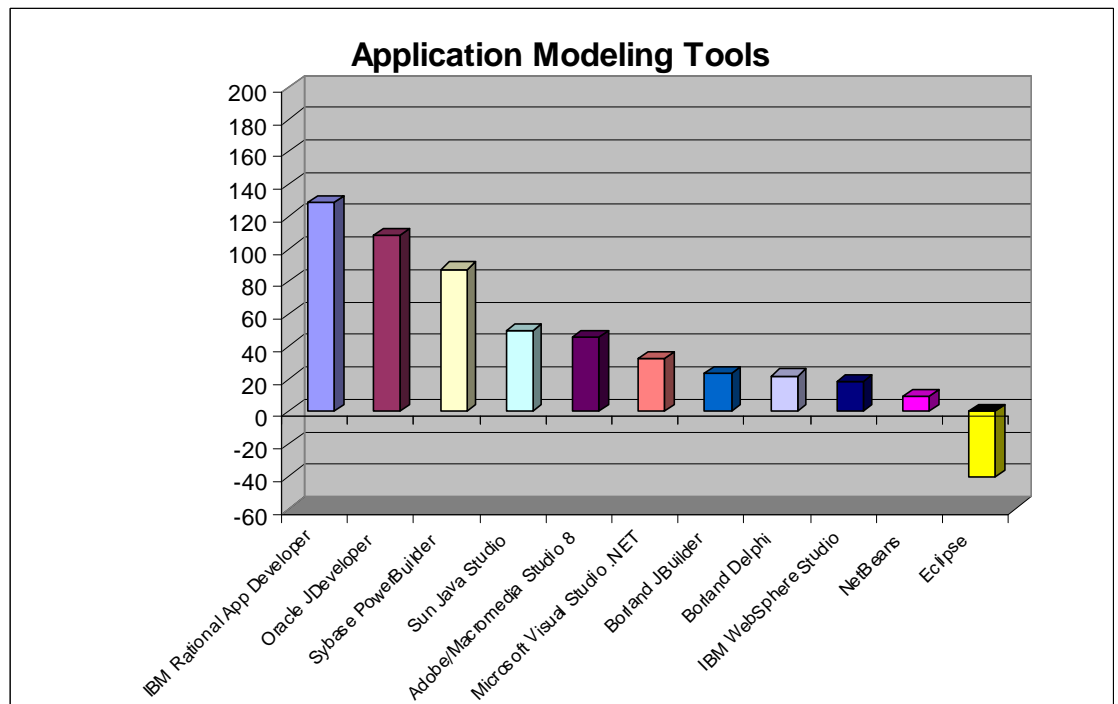
Web Design Tools

Web Design tools are designed specifically for just that – designing web sites, portals, and other applications that run over the Internet. Adobe's Macromedia Studio 8 was built from the ground up with precisely these capabilities in mind, and it is no surprise that developers using Studio 8 are extremely satisfied with the included web design tools. These include Dreamweaver – one of the most popular web design and html tools, Flash – the number one animation technology, plus Fireworks 8 – a graphics editor, FlashPaper 2 – a PDF tool and the Web site manager Contribute 3. Studio 8 scored much better than any of the other competitors in this ranking.

IBM and Sun both got somewhat average marks in this area, while the other IDEs did not fair so well. The reason is likely that there has been a separation between web design tools and professional development tools with a corresponding lack of attention paid to web design tools in traditional IDEs.

Web Design Tools	Relative Ranking
Adobe/Macromedia Studio 8	153.8
IBM Rational Developer	93.3
Sun Java Studio	81.0
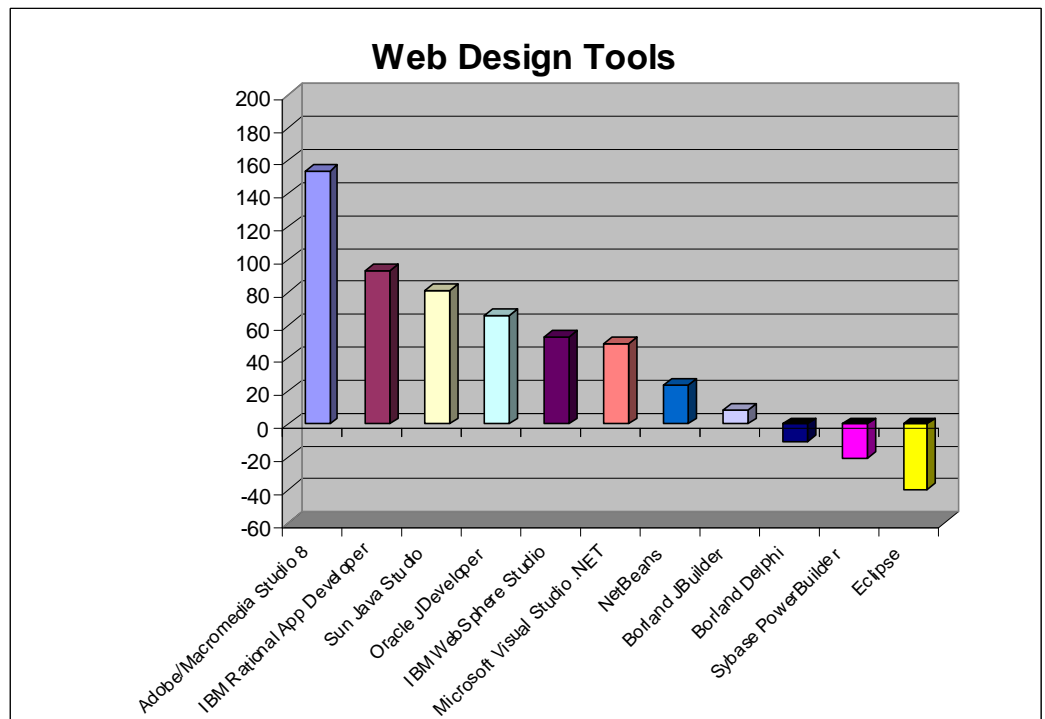
Sample Applications

Sample Applications	Relative Ranking
Sun Java Studio	56.8
Adobe/Macromedia Studio 8	34.3
IBM Rational Developer	33.1

Some might say that sample applications are not a tool and not necessary for the operation of any IDE and therefore that they are not a valid feature for comparison. However, Evans Data surveys over the last 8 years have consistently shown that from the developers' point of view, sample applications are one of the most critical parts of any tool. It's also clear that developers are not happy with the state of sample apps today. Across the board these IDEs received poor arks from developers on the quality and quantity of their sample applications. Sun Java Studio deserves praise for having providing better satisfaction to developers in this area than any other – and by a long ways. Still, even Sun's rankings are not great.

Sample applications not only illustrate to the developer how a tool works, but they're also mostly reusable. Developers can take snippets or whole programs of sample application code and build them right into their own applications. Thus sample applications provide for both education but also provide some shortcuts.

Sample applications do not ship only with IDEs. In the Open Source community there are plenty of applications with source code to be found, but they don't come included when you download Eclipse, which is probably why Eclipse received the lowest marks in this category.


Sample Applications
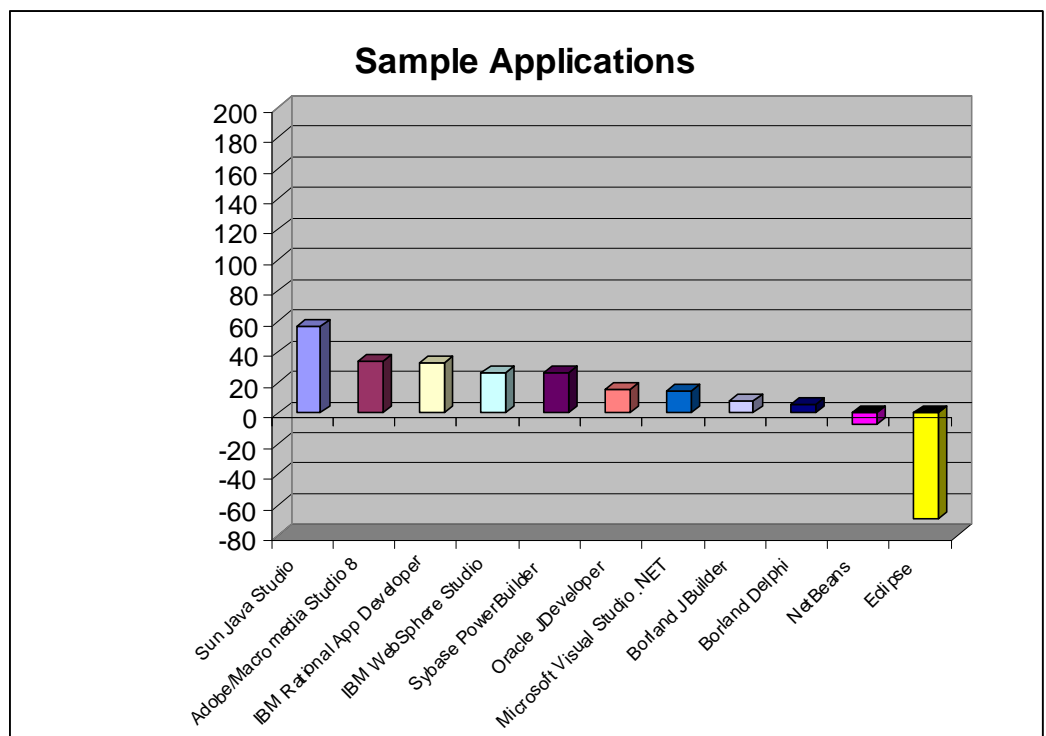
Profiler

Profiler	Relative Ranking
IBM WebSphere Studio	68.0
Sybase PowerBuilder	58.5
IBM Rational Developer	55.3

A performance profiler is a tool that is used on prototype code in order to optimize it or make it more efficient. Most profilers today have distributed capabilities so developers can identify bottlenecks in their code throughout a network. Performance analysis is often used to determine how long certain parts of the program take to execute, how often they are executed, or to generate a call graph. This information is then used to identify those parts of the program that take the longest to complete. These time consuming parts can then be optimized for better performance.

Many IDEs don't have a profiler included. And, in fact, developers have never seemed to value profilers very highly. For one thing, they're only useful during the last part of the development cycle. Additionally many developers rely on compiler optimizations for performance improvements. Note that Eclipse herein received the lowest ranking which is a comment on the availability of Open Source profilers

The IBM products and Sybase's PowerBuilder earned the highest rankings for profilers, but as with the documentation question, all the rankings here are relatively low.
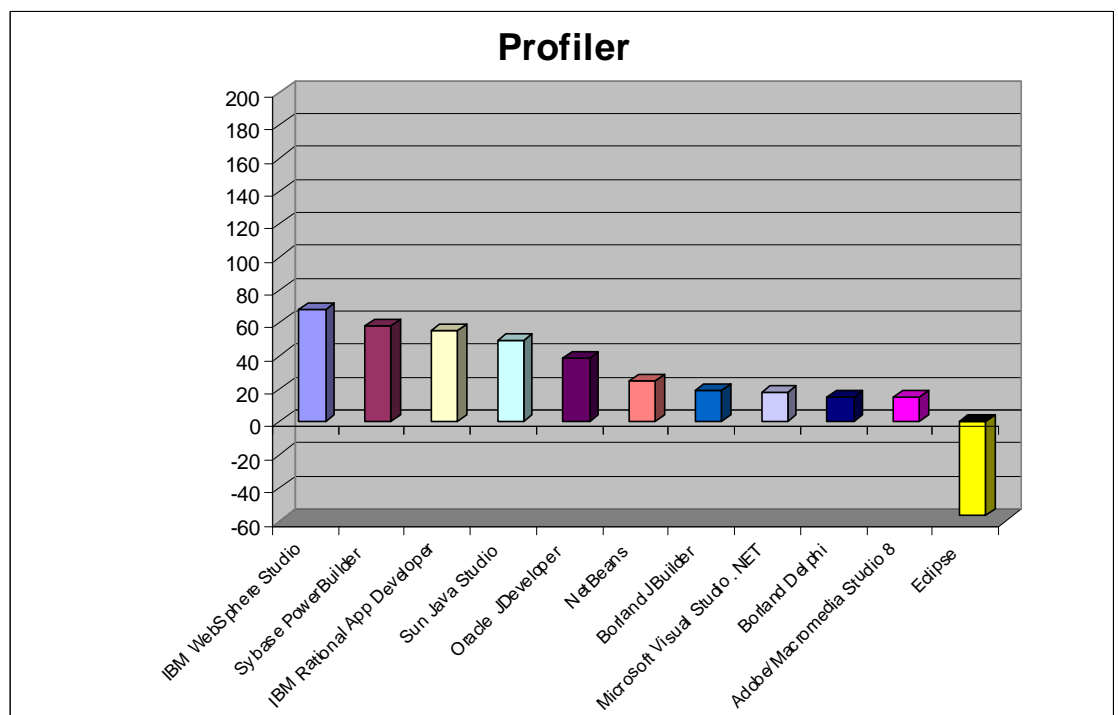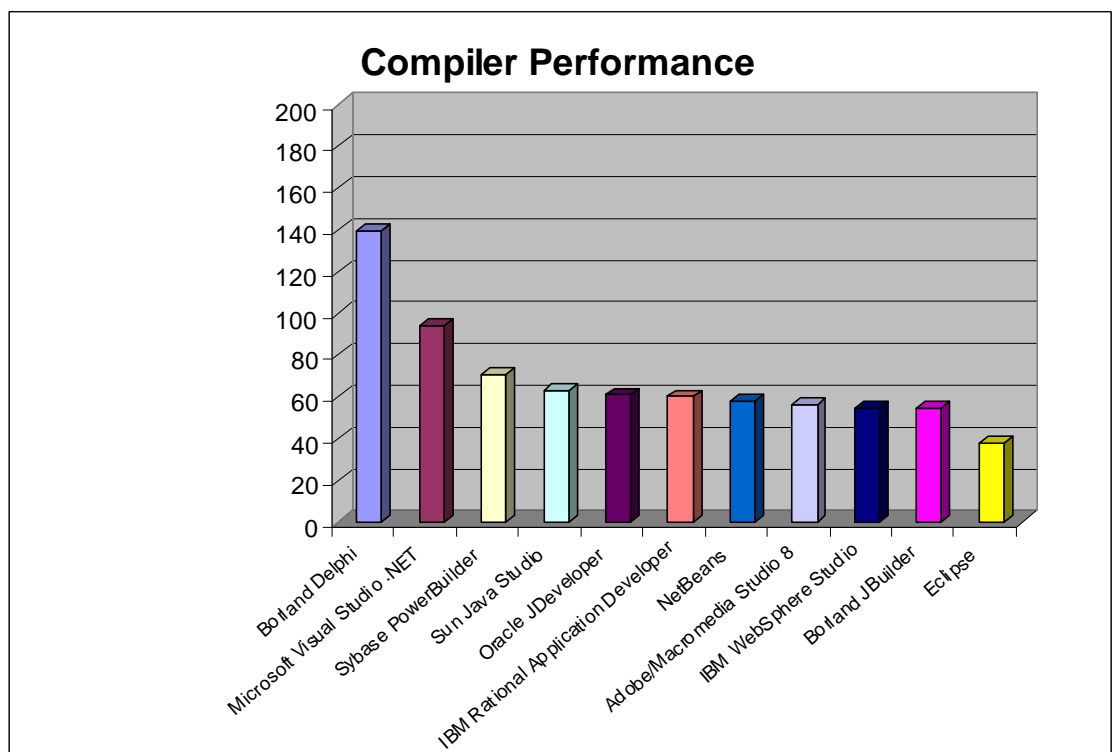
Compiler Performance

Compiler Performance	Relative Ranking
Borland Delphi	139.6
Microsoft VS .NET	94.2
Sybase PowerBuilder	70.4

"..performance becomes much more important for compilers than it might for other types of programs…"

Software programs execute with varying degrees of performance based on several factors including the hardware and operating system they're running on, the optimizations that were used when they were created, and the basic way in which they were created and coded. Compilers are software programs, and as such are subject to the same variability in performance as other programs. The difference between compilers and other programs is that compilers are often asked to compile extremely long applications and sometimes millions of lines of code, and so they may need to execute for a relatively long time. Thus performance becomes much more important for compilers than it might for other types of programs.

Borland has long been focused on performance of both its compilers and the resulting applications, and that dedication of high performance has consistently produced the fastest compilers, as their users herein atest. Microsoft has also devoted much time and effort to keeping its compilers running at optimum speed and its users also appreciate the fast execution of their compilers.

Note that most of the IDEs fall within a very narrow range of satisfaction levels, with Eclipse slightly less appreciated and Delphi and Visual Studio considerably ahead of the others.
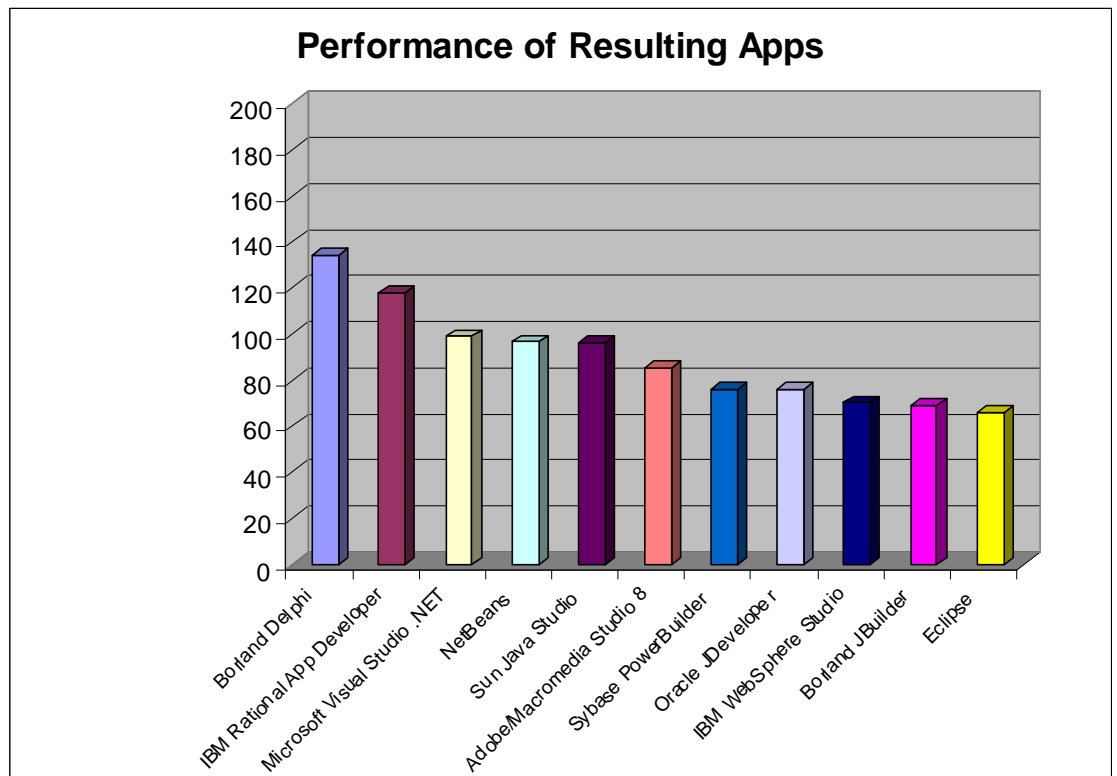

Compiler Performance

Performance of Resulting Applications

Performance of Resulting Applications	Relative Ranking
Borland JBuilder	134.1
Sun Java Studio	117.9
Microsoft VS .NET	98.8

When asked which is more important, compiler performance or the performance of the resulting compiled applications, developers invariably reply that they care more about how fast the applications they create are than how much time they spend waiting for the compile. There's good reason for that too, as the performance of the resulting application will determine to some degree how successful that application is in the market.

Compiler optimizations are techniques that have been built into a compiler to improve the performance of the resulting applications. In the past, developers used to apply some of these manually, but most compilers today automatically apply optimizations whenever they are appropriate. This frees the developer for other tasks, but also but the burden of application performance is squarely on the compiler.

Generally compiler optimizations are focused on improving performance, by avoiding redundancy, by inlining code and eliminating jumps where possible, by trimming unnecessary code, and by locating those pieces of code which are executed close together in time close together in memory.

Delphi gathered the best results in this question, followed fairly closely by IBM Rational Application Developer. None of the IDEs received very poor marks in this very important category. In fact, Sun Java Studio, a first-class IDE from Sun showed particular strength here – even beating out the eminent Visual Studio.

Performance of Resulting Apps

Borland Delphi; IBM Rational App Developer; Microsoft Visual Studio .NET; NetBeans; Sun Java Studio; Adobe/Macromedia Studio 8; Sybase PowerBuilder; Oracle JDeveloper; IBM WebSphere Studio; Borland JBuilder; Eclipse

Ease of Use

Ease of Use	Relative Ranking
Borland Delphi	154.2
Sybase PowerBuilder	135.4
Borland JBuilder	130.3

Ease of use is a highly subjective quality and can vary from one individual to another, not to mention from country to country or culture to culture. For those interested in the geographic differences in judging ease of use for these IDEs, please ask you sales rep about our Enterprise version of this report.

That said, one of the major reasons for the existence of IDEs is ease of use. It's quite possible to write programs using unrelated toolsets, it's just a lot more time consuming, tedious, and error prone. Integrated Development Environments provide the platform for tool interaction with the goal of orchestrating tool use in a harmonious and efficient way.

As the first major RAD tool, Delphi introduced a new style of programming that was designed to provide quick and easy applications. All three of the top choices in this survey for ease of use are RAD tools, and the developers that use them think of them as very easy to use. Adobe Macromedia Studio 8, though not developed as a RAD environment, brings with it a long history of user-friendly design and thus offers good ease of use.
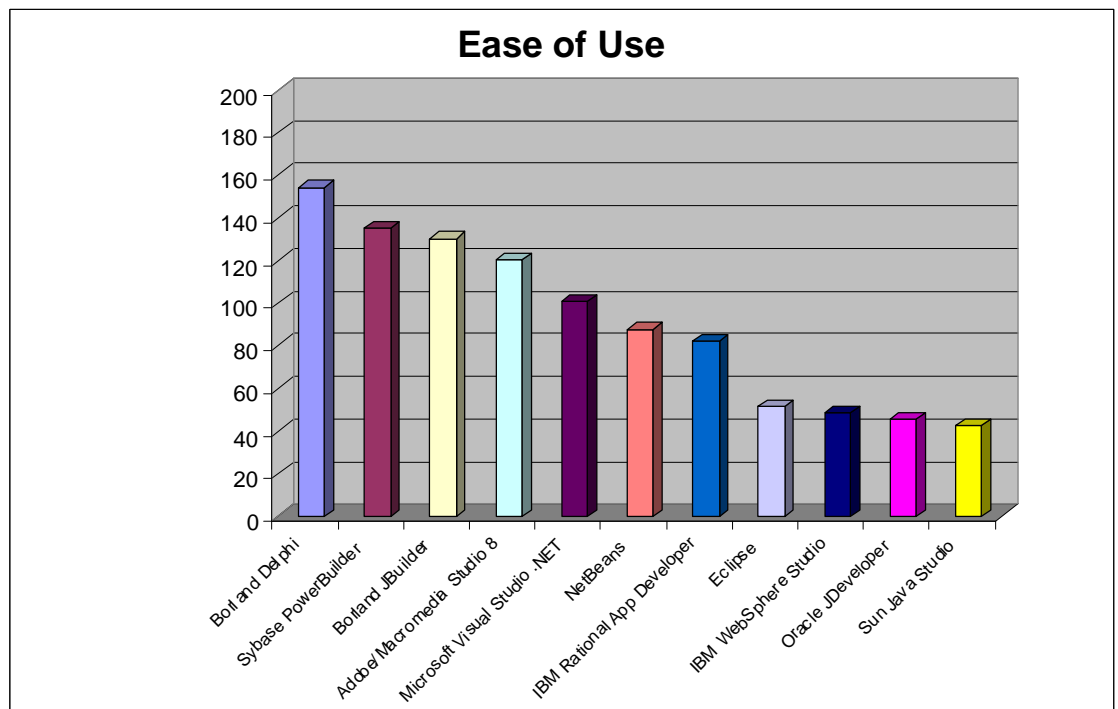

Ease of Use

Ability to Integrate Third Party Tools

Ability to Integrate Third Party Tools	Relative Ranking
Eclipse	122.7
IBM WebSphere Studio	85.2
Borland Delphi	81.3

"Today Eclipse defines the standard for third-party integration.."

Eclipse was IBM's answer to Sun's open source NetBeans Java development environment, and from the beginning it was designed to support a wide variety of plug-ins or third party tools from different vendors. In fact, most of Eclipse's functionality comes from plug-ins.

While Eclipse has always been a popular IDE, its adoption grew significantly when IBM spun off the Eclipse organization and released version 3. The new release enabled plug-ins to load dynamically, which was a large step forward in integrating third party tools. This change stimulated an expansion of the Eclipse ecosystem, such that many vendors began porting their development to the new Eclipse plug-in design. Today Eclipse defines the standard for third-party integration, as the results of this question show.

IBM Websphere Studio is based on Eclipse and shares the ability to integrate third party plug-ins or tools. At the same time, Delphi has a large and active group of users that provide third-party tools.
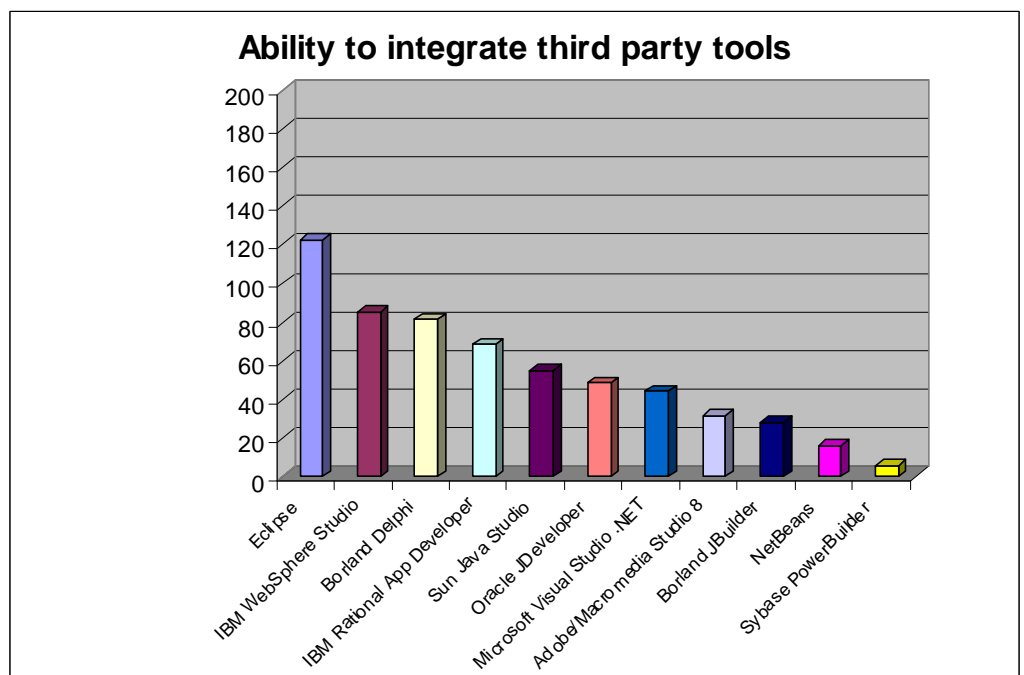

Ability to integrate third party tools

Availability of Third Party Tools

Availability of Third-Party Tools	Relative Ranking
Eclipse	111.2
Borland Delphi	93.7
IBM Rational Developer	77.4

Eclipse is a community as much as a technology. Membership in the Eclipse organization consists of three different levels. There are thirteen Strategic developers who are also members that actively contribute to the Eclipse platform through development or financial support. On top of these, there are fifteen Associate members, who are not for profit organizations or members of the media, like IDG Japan and the Object Management Group. But the vast bulk of the members are Add-in providers, or makers of plug-ins for the Eclipse platform. There are 85 member companies of the Eclipse organization that all make plug-ins for Eclipse, including such heavyweights as Novell, Hitachi, and Red Hat. With such a huge and vibrant community and with a platform that was really designed to accommodate a wide variety of plug-ins, it's no surprise that Eclipse gets excellent marks from its developers for the availability of third party tools.

Delphi also has a large and very dedicated user base that has been developing third party add-ins for more than ten years. With such a community in place, it's no wonder that Delphi is strongly supported with a lot of third party tools.

Sybase users expressed disappointment with the availability of third-party tools for integrating with PowerBuilder. With its proprietary history, PowerBuilder is not thought of as having a strong support community.


Availability of third-party tools
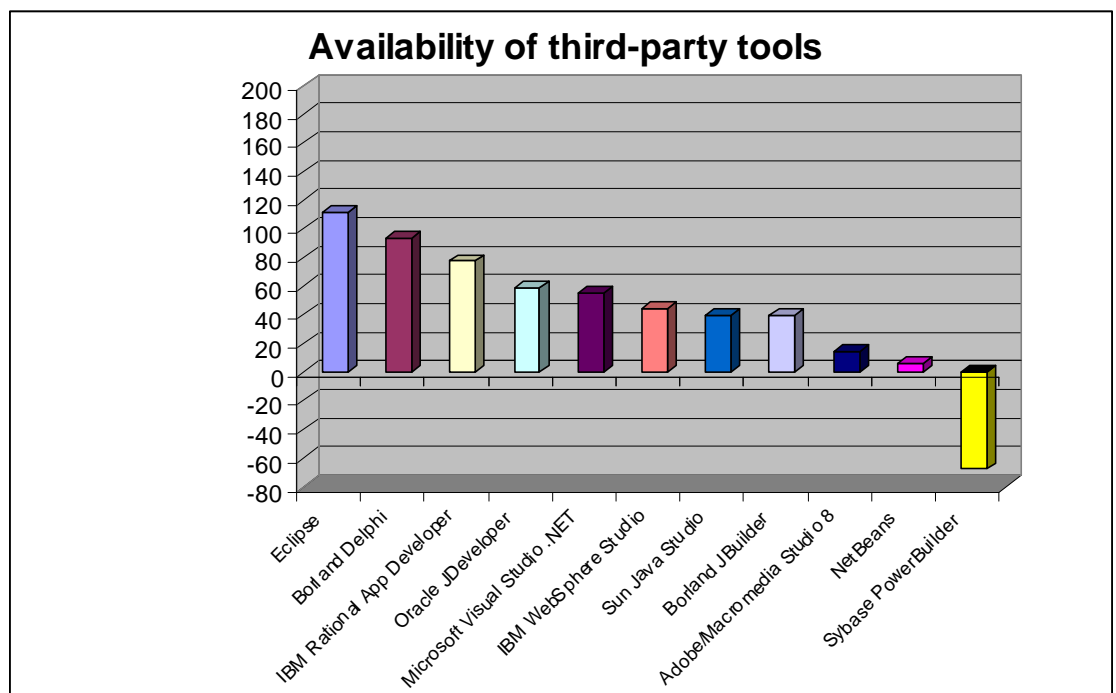
Quality of Tech Support Options

Quality of Tech Support Options	Relative Ranking
IBM Rational Developer	59.9
Oracle JDeveloper	55.8
IBM WebSphere	51.8

One of the main issues with Open Source software is and has always been the question of who is going to support the software. Who is going to answer questions, help with deployment and installation problems, and identify and fix bugs? While some companies have started to support Linux or other OSS, they have not been wildly successful and support typically comes from a distributor for the software or, more likely, from the development community itself. While it is true that the community does support Eclipse or NetBeans, it is largely in an Ad Hoc way. When a developer encounters a problem or has a question he must look online for information or post a question to the community. This do-it-yourself type of tech support was not very satisfying to the developers who took this survey.

The top five products from IBM, Oracle, Sun and Sybase scored very closely to each other. These are all well-established companies that understand the importance of tech support in a development tool and providing developers with knowledgeable and accessible tech support. In this way, it seems that Open Source programs still have a long way to go.
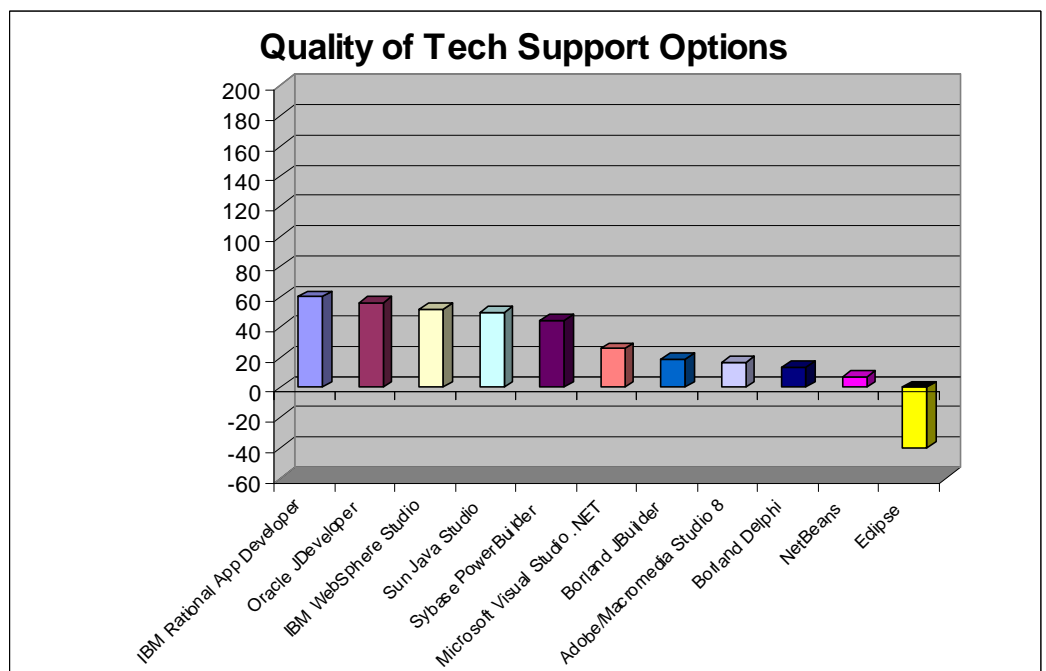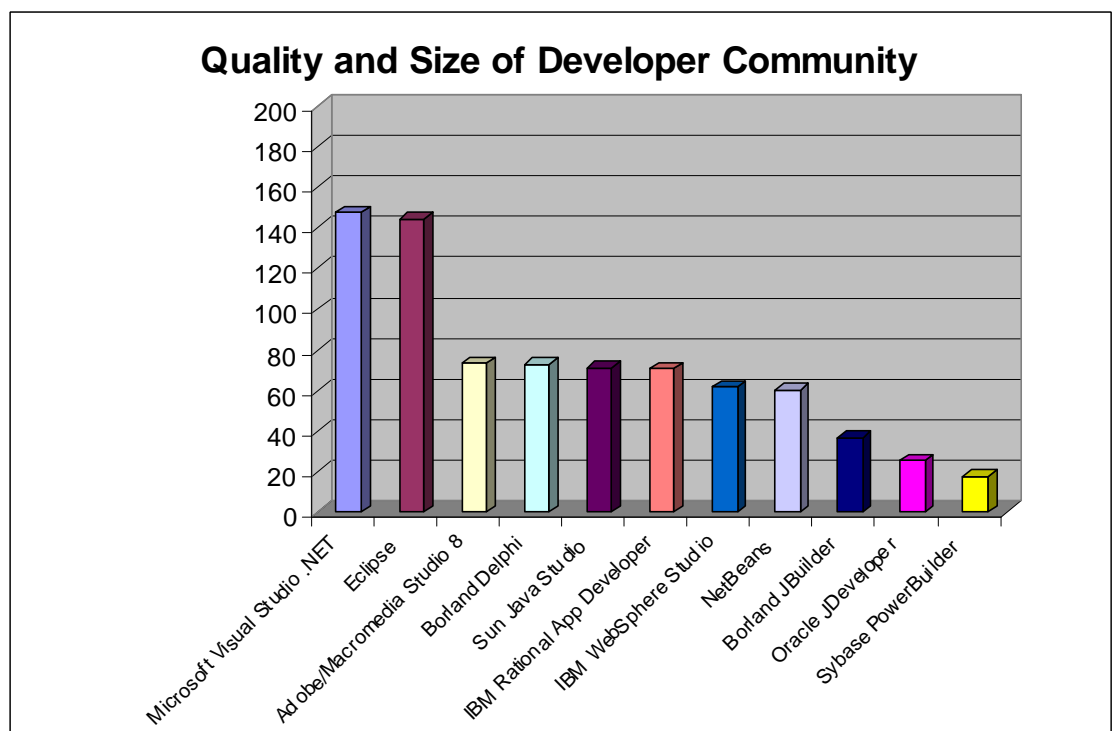
Quality of Tech Support Options

Quality and Size of Developer Community

When it comes to developer communities, two IDEs stand far above any of the others – Visual Studio and Eclipse. Borland, Sun, and IBM have all spent a lot of effort and expense on building a developer community around their products and have all succeeded to some extent, but Microsoft and now the Eclipse organization have succeeded in a much more spectacular way in cultivating significant numbers of developers and uniting them in a community.

In the case of Microsoft, history explains well how this happened. From the early days of DOS Microsoft understood the strategic value of getting developers to write to their operating system. They developed MSDN, the world's largest and most respected developer relations program, and with Windows they have dominated development for the last fifteen years. More developers write for Microsoft platforms than for any other and this means there is a huge and active developer community.

Eclipse is also known for its community. Though not as large as Microsoft's, the Eclipse developer community is an especially vibrant and robust one, and one that is growing faster than any other. In some ways, Eclipse actually is a community rather than just a technology, and this bodes well for Eclipse – and also for NetBeans. As the OSS community evolves the contributions from the members will develp thse two open source IDEs into fully mature and powerful environments. The open source community is dynamic and fresh and the outlook for Eclipse and NetBeans echoes that..

Quality and Size of Developer Community	Relative Ranking
Microsoft VS.NET	147.3
Eclipse	144.5
Adobe/Macromedia Studio 8	73.5

"When it comes to developer communities, two stand far above any of the others..."

Quality and Size of Developer Community

Profiles: Adobe / Macromedia Studio 8

Adobe/Macromedia Studio 8	Relative Ranking
Web Design Tools	153.8
Ease of Use	120.3
Editor	116.0

Adobe Macromedia Studio 8 combines the latest releases of Dreamweaver, Flash Professional, Fireworks, Contribute and FlashPaper Studio, and is the first release of Studio since Adobe completed its acquisition of Macromedia. True to its nature and installed base, Studio 8 is designed to help developers and even hobbyists create attractive and dynamic web pages and content. It offers advanced graphics, text, animation, video and audio tools, as well as the popular Flash technology for creating animation and interactive web content.

The Studio 8 users' ratings as shown here reflect the targeted market goals of Studio 8. The Web Design tools are the most prized aspect of Studio 8 along with the closely related editor. Through many years of fine tuning for hobbyists and graphic artists as well as developers, Macromedia has perfected the ease of use of its IDE and the Studio 8's users agree.

On the other hand, the product may insulate its users too heavily for many developers' taste. The apparent lack of anything but a script debugger, while fine for hobbyists, does not please professional developers. Studio 8 received the worst rating of any IDE on its debugger.

Studio 8 has a list price of $999. It is popular throughout North America, EMEA and APAC, with considerable strength in the APAC region.


Adobe Macromedia Studio 8
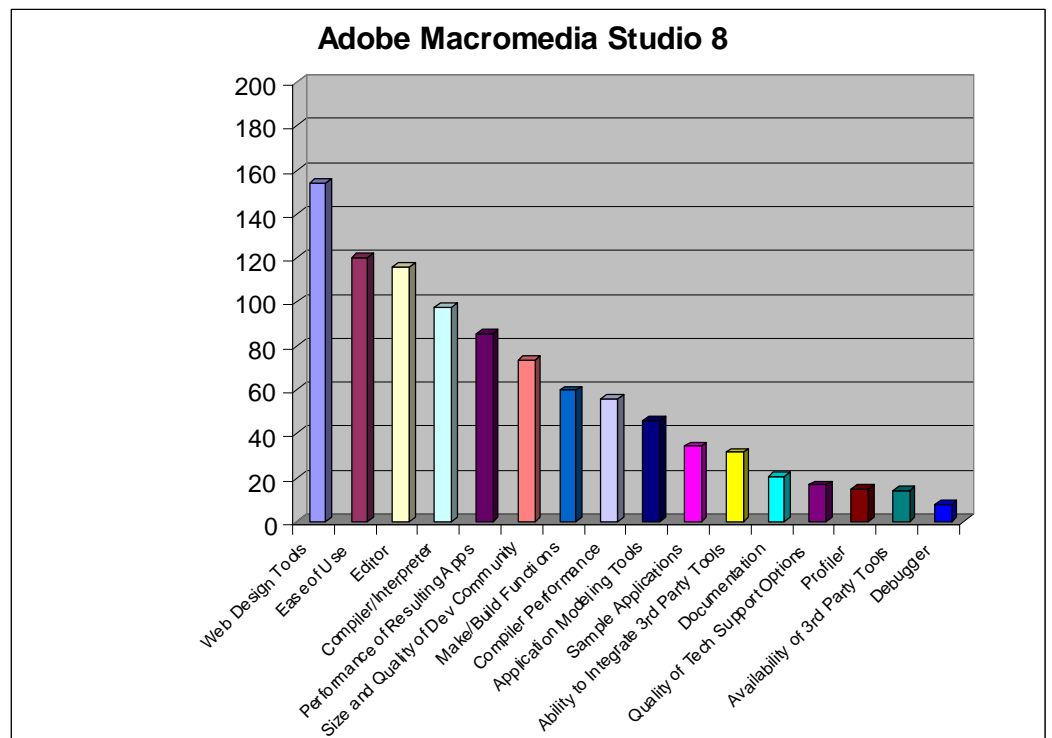
Profiles: Borland Delphi

Borland Delphi	Relative Ranking
Compiler / Interpreter	184.4
Ease of Use	154.2
Compiler Performance	139.6

Borland introduced Delphi in 1996 as its first RAD development environment. Created by Anders Heilsberg, who also created Turbo Pascal and the C# language, it is based on Object Pascal – an object-oriented version of the Pascal programming language. Delphi created a lot of excitement when it was first introduced as it saved time and tedious tasks in application development and truly defined RAD development. Delphi has cultivated a large and active developer community over the last ten years, and its users are loyal and admiring.

Delphi 2006 sports an enterprise framework, a reusable visual component library, and a fully integrated suite of modeling tools. Its multi-language developer environment for Microsoft® Windows® and .NET supports Delphi (both Windows and .NET), as well as C, C++ and C# applications within a single environment.

While Delphi is a professional developers' IDE, it also incorporates the RAD development strategy and thus its users give it high marks for ease of use. But the real reason developers love Delphi is because of the famed Borland compiler. Long renowned for the speed of the compiler itself plus the optimizations that give resulting applications good sharp speed, Delphi provides the speed of compilation as well as RAD development for maximum efficiency.

Delphi ships in three versions: Professional - $1090, Enterprise - $2490, and Architect - $3490. Delphi is particularly strong in the EMEA region.
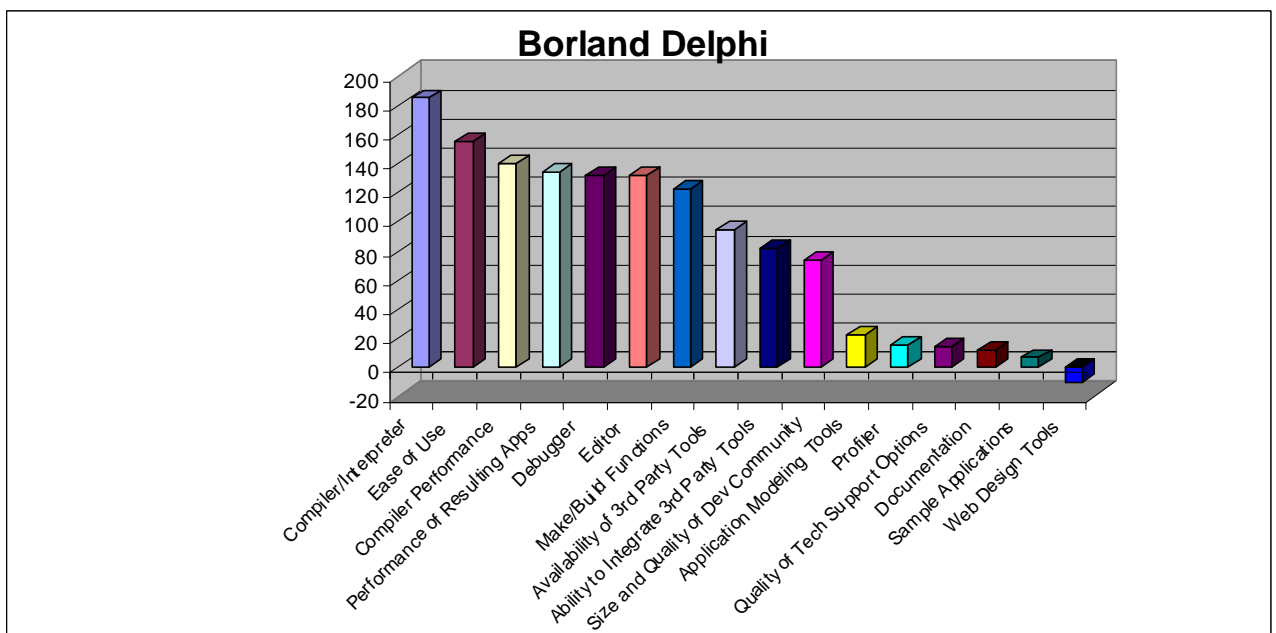
Borland Delphi

Profiles: Borland JBuilder

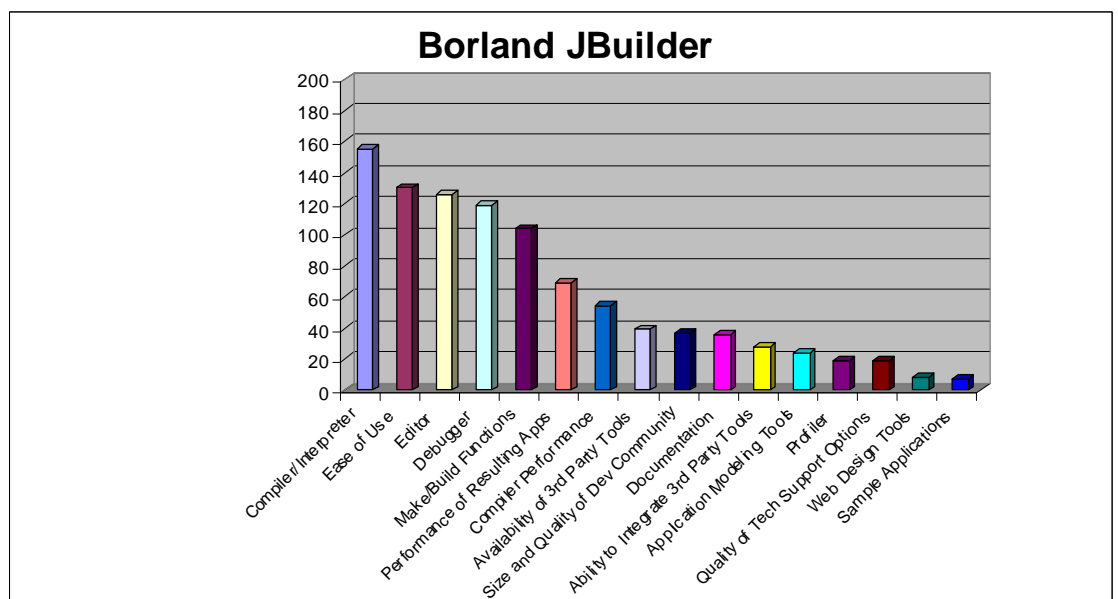| Borland JBuilder	Relative Ranking
Compiler / Interpreter	155.6
Ease of Use	130.3
Editor	126.2

When JBuilder was first introduced in the mid-nineties, it was actually written in Delphi. Just as with many of the first Java interpreters, it suffered from poor performance. However, since then there have been many iterations of JBuilder as Borland constantly improved the quality of the product. Today it is a fast and efficient Java IDE completely written in Java.

As we can see from the user ratings, the quality of the compiler / interpreter is first-rate, with JBuilder users almost as enthusiastic about the JBuilder compiler as their Delphi cousins are about Delphi's. JBuilder has also managed to make an easy to use product with a clear and intuitive editor and a powerful debugger.

Borland JBuilder 2006 provides 2-way JSF and Struts visual designers, the latest JDK™ 5.0 language features, integrated memory and CPU profiling tools, and code-level collaboration features such as shared editing and joint debugging.

Borland JBuilder is available in a Developer version - $499, and an Enterprise version - $3,500. Though weaker than Delphi in EMEA, that region is still a stronghold for JBuilder.

Borland JBuilder

Profiles: Eclipse

| Eclipse	Relative Ranking
Size/Quality of Dev Com	144.5
Compiler/Interpreter	143.7
Editor	138.2

Eclipse is as much a phenomenon as it is an IDE. It is wildly popular among Java developers and Open Source developers alike, and now that it supports languages other than Java, we expect its raging popularity to swell even faster. Eclipse has been called the "killer app" of OSS development tools and its market share is increasing constantly. No doubt one of the reasons for its huge success is its business model. The main core of the Eclipse IDE provides only basic functions and acts as a base for plug-ins. These plug-ins are what has taken the industry by storm as more and more ISVs and OSS developers create and extend Eclipse plug-ins.

Although it is the same model as NetBeans, Eclipse has created much more excitement in the industry and has captured much more mindshare than NetBeans. One reason might be the actual Eclipse core – created by IBM and used as the base of their proprietary IDEs. The other might have been the perfect timing or the creation of a large OSS community.

Eclipse's strengths are related to the quality and size of the development community as well as to a great availability of third-party tools and a really great ability to integrate them. Problems are typically the same as for other OSS applications; i.e., lack of some specific tools, poor technical support options, and lack of sample applications.

Eclipse is considerably stronger in North America, where it came into being, but is growing quickly in both APAC and parts of EMEA. As mentioned before, the open model of Eclipse allows it to evolve in a dynamic way that promises to not only address quality issues but bring true innovation as well.

23
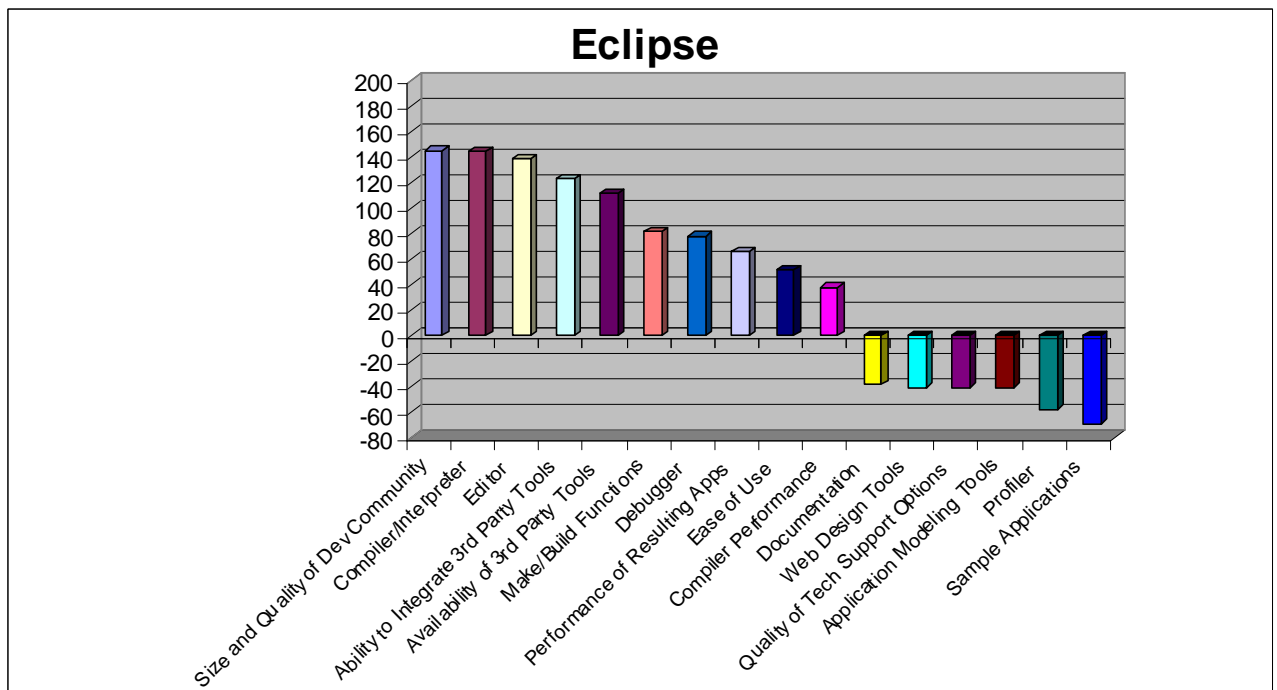
Profiles: IBM WebSphere Studio

| IBM WebSphere Studio	Relative Ranking
Compiler/Interpreter	143.3
Integrate 3rd Party Tools	85.2
Debugger	79.9

The difference between IBM WebSphere Studio and Eclipse is more than just $3500, but technically there are a lot of similarities between the two. That's because the IBM WebSphere Studio development environment is built on the WebSphere Workbench, which is the Eclipse 3.0 IDE productized for IBM. This means that WebSphere users have access to the large community of Eclipse users and plug-ins.

But WebSphere users also have the full support of IBM. This product scored third in the "Quality of Tech Support Options" rankings, whereas Eclipse was last. That's a big advantage, especially in a corporate environment where technical support can be a critical issue. IBM provides the support and stability that Open Source tools have to do without and that makes WebSphere a better choice for many environments.

IBM has also supplied a lot of first-class tools with WebSphere Studio including some from Rational (like the ClearCase source control tool). There are also tools for web page design, site design and Java Server Faces. But the feature that developers in this survey said they were most pleased with was compiler/interpreter. That was also the feature that Eclipse users preferred.

IBM WebSphere Studio Application Developer 5.0 for Windows and Linux version 5.0 has a list price of $3500. It's stronger in North America and APAC than in EMEA.

IBM WebSphere Studio
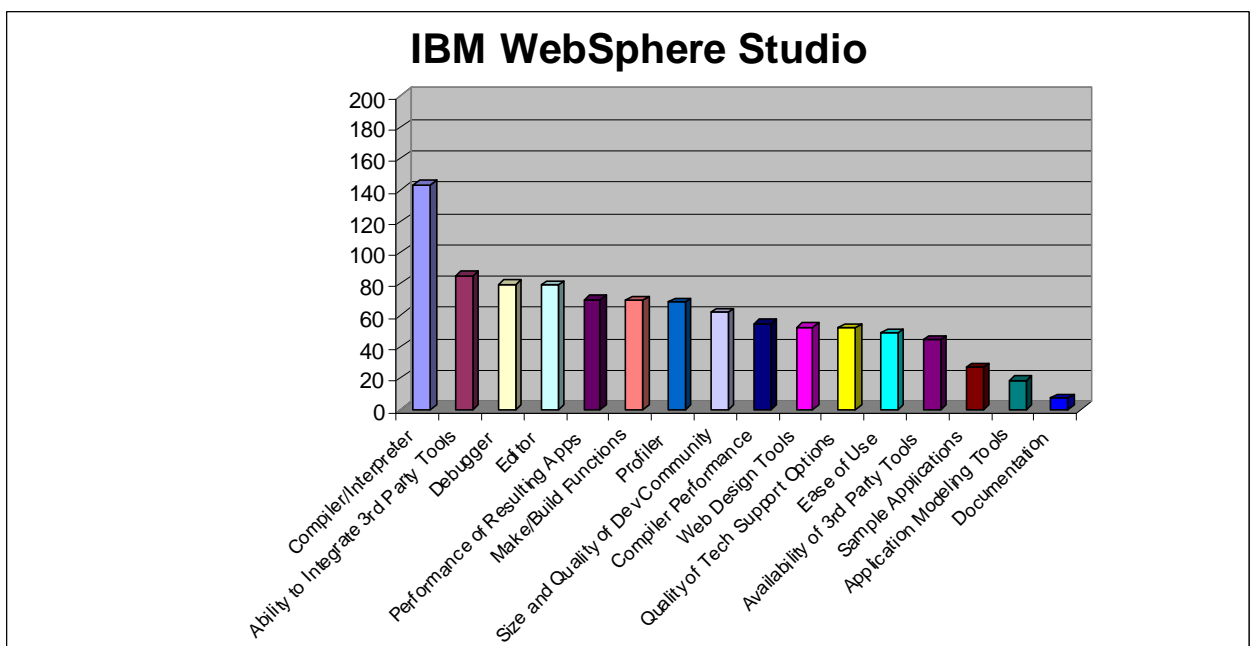
Profiles: IBM Rational Application Developer

IBM Rational Developer	Relative Ranking
App Modeling Tools	129.0
Make/Build Functions	128.9
Editor	128.2

"To this day we have yet to see UML modeling tools that rival Rational's."

When IBM acquired Rational it also acquired all of the previous Rational acquisitions, such as Pure Software and Atria. This brought fine tools into the IBM fold, such as the Clear Case configuration management tool, and Purify. Though Purify is still not sold as a product, Clear Case is, and the technology behind all of the acquired tools lives on in this software platform.

IBM Rational Application developer supports SOA with visual construction tools. It includes a UML-based visual editor, a complete set of visual development tools, with a good full-featured debugger, and automated deployment tools. Rational Application Developer is also based on Eclipse.

Developers liked the Rational UML-based application modeling tools best of all the features ranked here. Rational Rose was the premier modeling tool of the nineties and employees of Rational Grady Booch and James Rumbaugh actually spearheaded the UML modeling movement. To this day we have yet to see UML modeling tools that rival Rational's.

While none of the scores that the IBM Rational product received were exceptionally high, most were very good. The developers consistently liked the Rational features, and it was those consistent good marks that made Rational Application Developer come in with the overall best score.

IBM Rational Application Developer showed more strength in this survey in North America and APAC than EMEA.

IBM Rational Application Developer

25
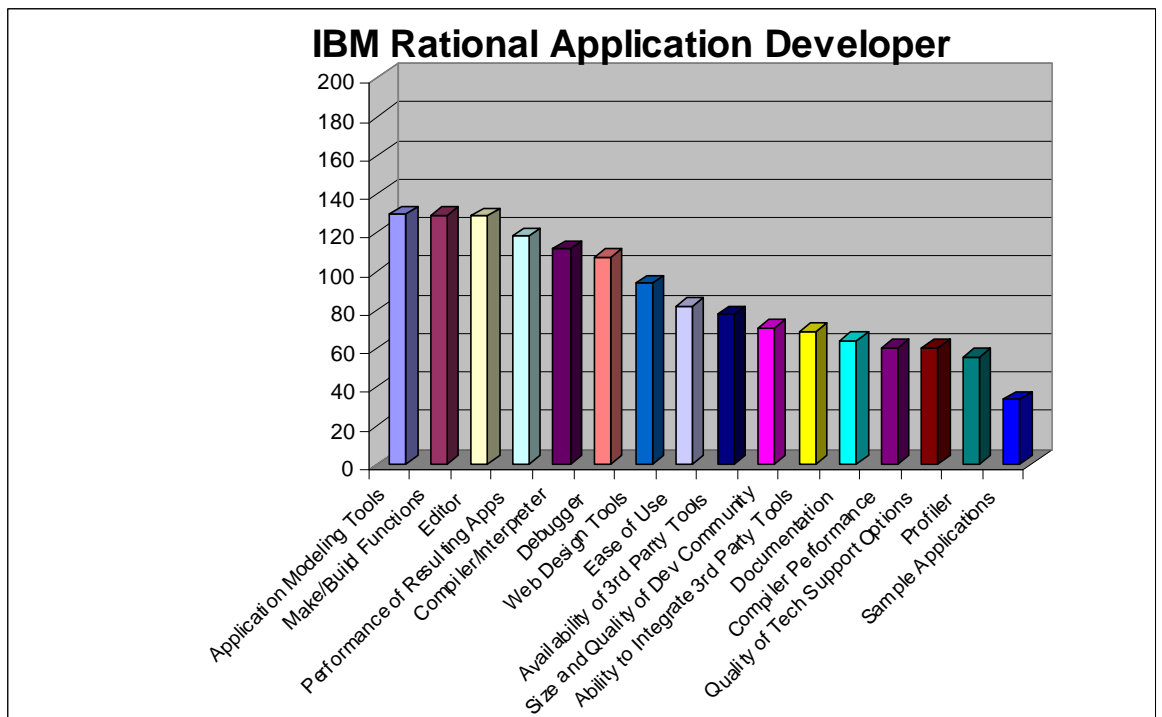
Profiles: Microsoft Visual Studio.NET

| Microsoft VS.NET	Relative Ranking
Compiler/Interpreter	168.7
Editor	159.9
Size/ Quality of Dev Com	147.3

Visual Studio is the combination of Visual C++, Visual Basic, Visual C# and Visual J#- all in one package. Ten years ago these were all sold separately but the idea of an IDE that could be used across languages was a good one, as most developers use multiple languages. Visual Studio is a complete traditional IDE with a full toolset that can be used to create programs, web sites, web applications, and Web Services that run on Microsoft Windows, PocketPC, Smartphones, and the World Wide Web.

Microsoft Visual Studio.NET is by far the most used IDE anywhere in the world with about twice as many users as any of its competitors. It is supported by the world's largest and best implemented developer relations program and it serves the world's largest installed base of platform users.

While the developers in this survey rated the compiler/interpreter highest, they also liked the editor and the debugger – both solid technologies with a long history at Microsoft. Note that one of the most highly rated aspects of Visual Studio was the size and quality of its developer community. These days Open Source development communities are the focus and it's easy to forget that Microsoft commands the largest and best established developer community anywhere. That developer community means it's simple for Visual Studio developers to find helpful tips and tricks, online support groups, and even jobs.

Visual Studio is strong in all regions.
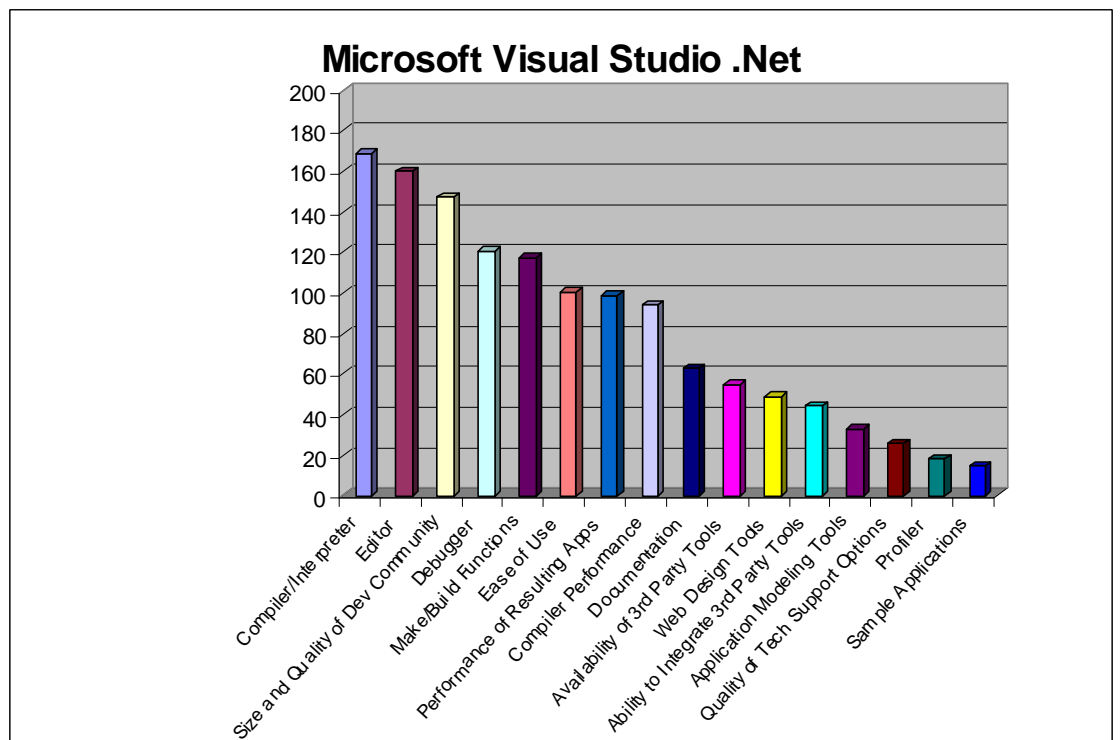
Profiles: Oracle JDeveloper

| Oracle JDeveloper	Relative Ranking
Application Modeling Tools	108.2
Compiler/Interpreter	99.0
Make/Build Functions	91.96

Just as the Oracle database can be found more often in large companies, this is also true of JDeveloper, and its features are designed to help the corporate enterprise developer create large and complex applications. The most valued feature for respondents here was JDeveloper's modeling tools. JDeveloper's UML-based visual modeling tools are a huge asset in architecting enterprise applications.

JDeveloper users also liked the basic components of any IDE and toolset combination;, i.e., the compiler/interpreter, build features, editor and debugger. One surprising finding was that JDeveloper users rate the quality and size of the developer community poorly. Oracle Tech Network boasts 4.3 million registered users, so where's the disconnect? It may be found in the makeup of the OTN subscribers.

In June 2005 Oracle decided to cut the price of JDeveloper from $995 to nothing. This was clearly a reaction to the rising tide of Eclipse users. It's very difficult to compete in Java with Eclipse especially when your product costs $995.

In this survey, Oracle JDeveloper showed more strength in APAC than in other regions.

Oracle JDeveloper
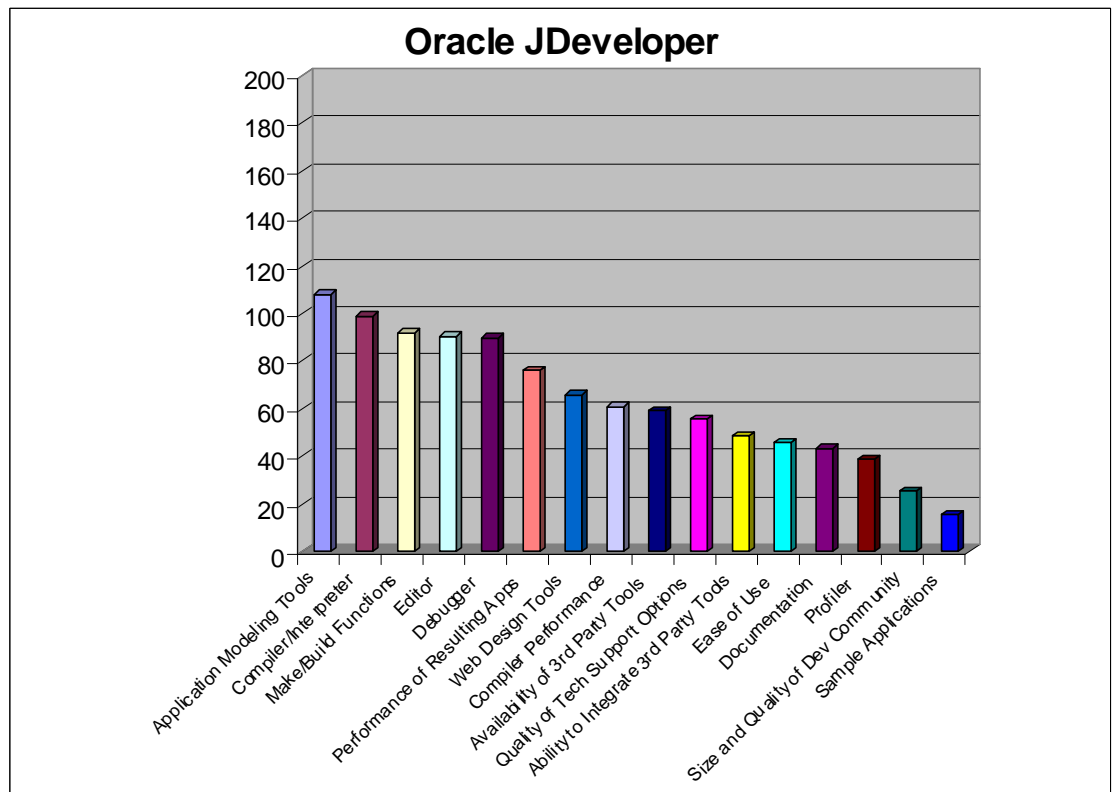
Profiles: NetBeans

NetBeans	Relative Ranking
Compiler/Interpreter	114.1
Editor	98.8
Performance - Resulting Apps	96.5

NetBeans began in 1997 as an IDE and platform for Java and it was bought by Sun Microsystems in 1999. Sun Open-Sourced the NetBeans IDE the following year. Since then, the NetBeans community has continued to grow. Applications are built on modules, and can be extended by adding new modules. Thus applications based on NetBeans can be easily extended by third-party developers. This is similar to the Eclipse model, and some say that Eclipse was IBM's answer to NetBeans.

Just as with Eclipse, the core of NetBeans is central with modules continually being added on by the community. Thus it seems logical that the compiler/interpreter and the speed of resulting applications were two of the most satisfying things to developers who use NetBeans. On the other hand, NetBeans suffers from some of the same problems that Eclipse does; i.e., poor quality of tech support and a lack of sample applications – both conditions related directly to their Open Source nature.

NetBeans has less acceptance in the APAC region than in the others, but just as with Eclipse, the open and dynamic nature of NetBeans allows its community to heighten innovation, address weaknesses, and grow. With its strongest compoenents being the most compelling, NetBeans provides its developers with a solid basic core on which to add plug-ins and other components.
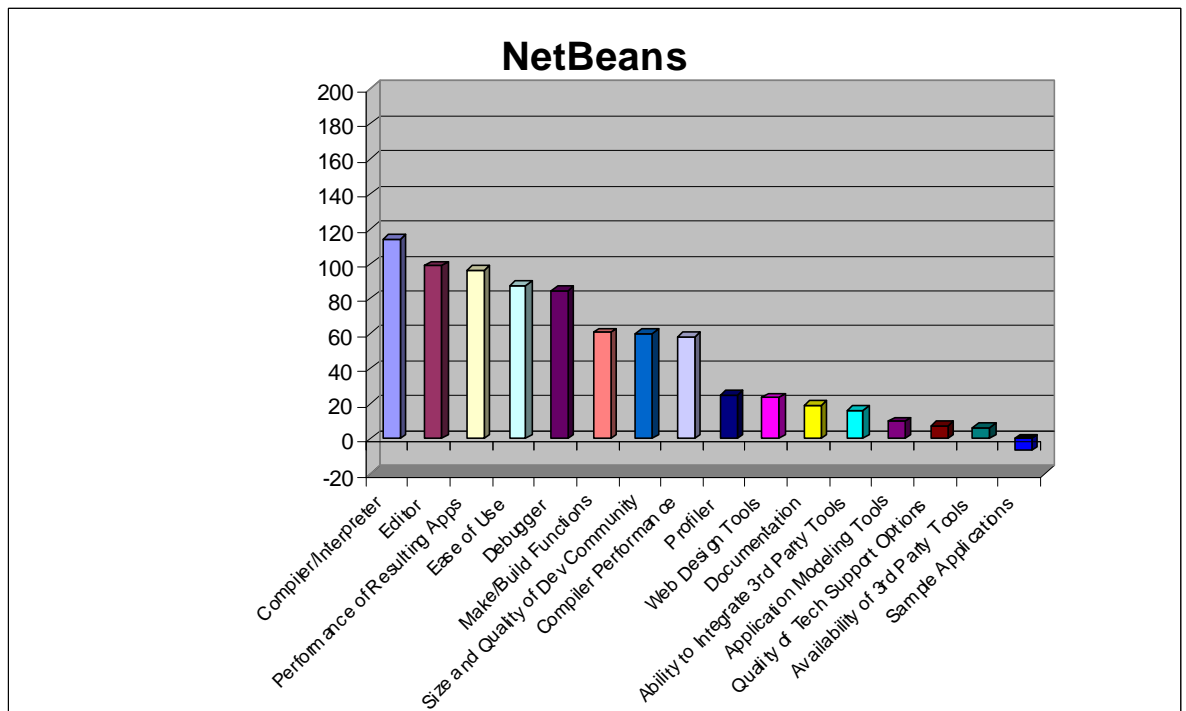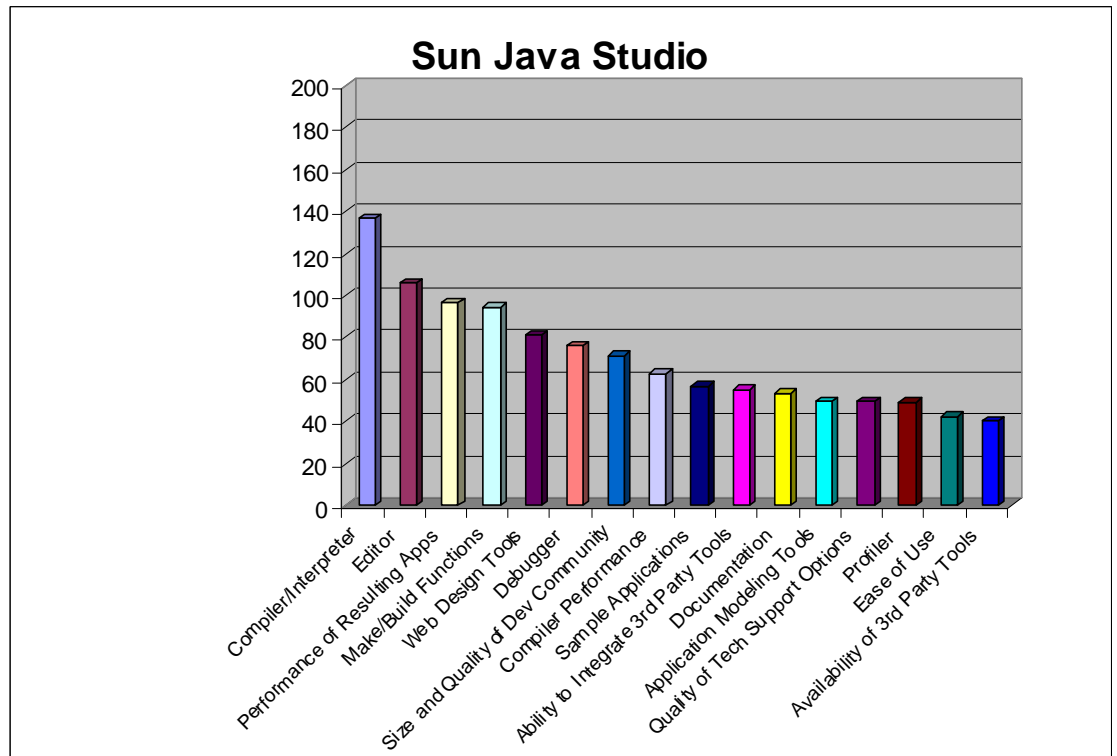
Profiles: Sun Java Studio

Sun Java Studio	Relative Ranking
Compiler/Interpreter	136.7
Editor	106.2
Performance - Resulting Apps	96.4

"..users are a lot more satisfied with the product under Sun's nurture and guidance than they are with the Open Source community…"

Sun Java Studio is Sun's proprietary IDE for Java, and as we have seen, its users are a lot more satisfied with the product under Sun's nuture and guidance than they are with the Open Source community generated NetBeans. Sun Java Studio has built-in support for Solaris and is aimed at developers using Sun's large servers. Sun Java Studio Enterprise is a version aimed at architects and is free to those who join the Sun Developer Network. It includes features aimed at enterprise developers such as UML modeling, instant collaboration, and application profiling. The IDE is also fully integrated with a complete runtime environment: Sun Java Enterprise System. Another version – Creator, is based on NetBeans and is aimed primarily at web developers and those doing RAD development.

As with most of the IDEs, developers using Sun Java Studio felt the most satisfaction with their compiler/interpreter. This is related to their appreciation for the speed of resulting applications. Basics, like editor, make/build facility and the web design tools were also rated highly by developers using Sun Java Studio. Note that the three most liked components of Sun Java Studio are the same as for NetBeans – all the most basic and essential features and capabilities.

Sun Java Studio shows strength in North America as well as the APAC region.

29

Sybase PowerBuilder

| Sybase PowerBuilder	Relative Ranking
Ease of Use	135.4
Compiler/Interpreter	112.0
Editor	105.9

PowerBuilder was created by PowerSoft in the nineties, and was later acquired by Sybase. Introduced as a RAD development system, it includes tools for drawing the user interface and reports and accessing database content. The tools are provided in an IDE.

Users of Sybase's PowerBuilder IDE were most satisfied with the ease of use that Sybase has tried to instill in its product, and apparently with some success. They also liked the compiler and the editor.

PowerBuilder, however, did not do well on the availability of third-party tools, indicating that the PowerBuilder development community is not as active, numerous, or diverse as Sybase might wish.

PowerBuilder comes in three versions – Desktop for $295, PowerBuilder Professional for $1295, and Enterprise for $2995. Sybase PowerBuilder's developer community is more evident in North America and APAC than EMEA.
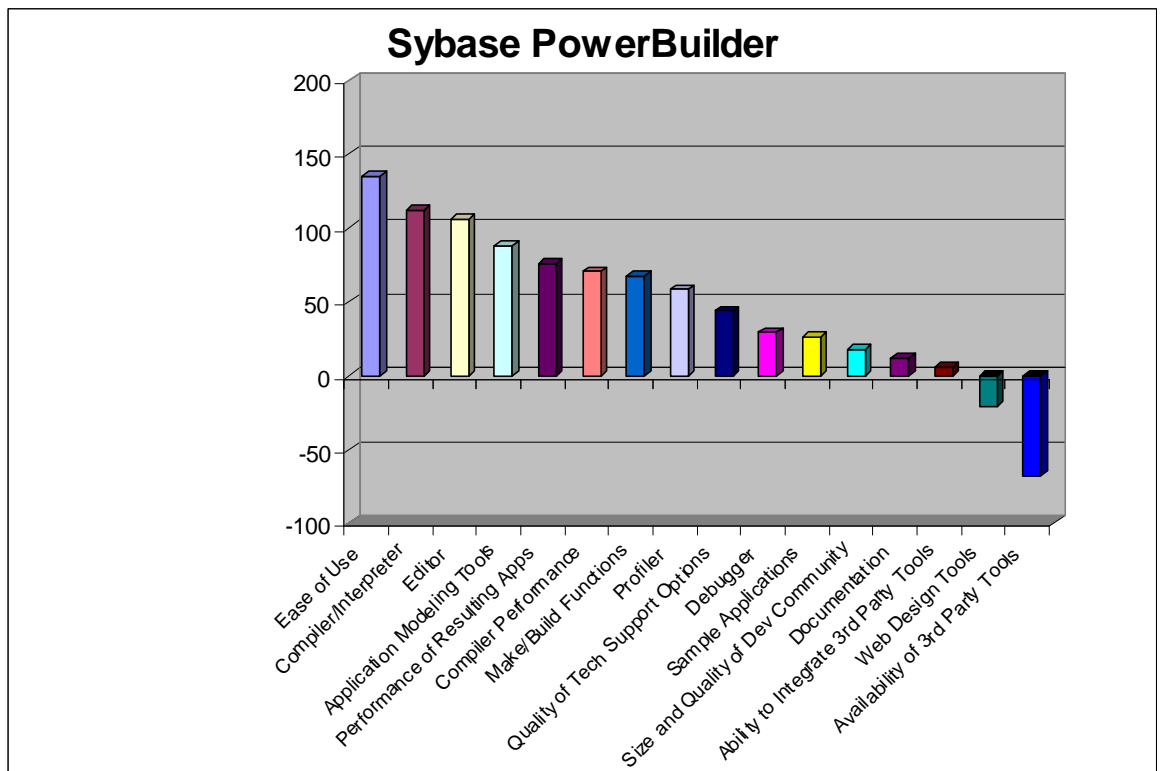
Overall Rankings

The chart on this page shows the combined overall ranking for the top eleven IDEs. Relative scores for each of the categories were calculated for each and then the scores were added together. This resulted in a combined overall ranking for each IDE - as shown below.
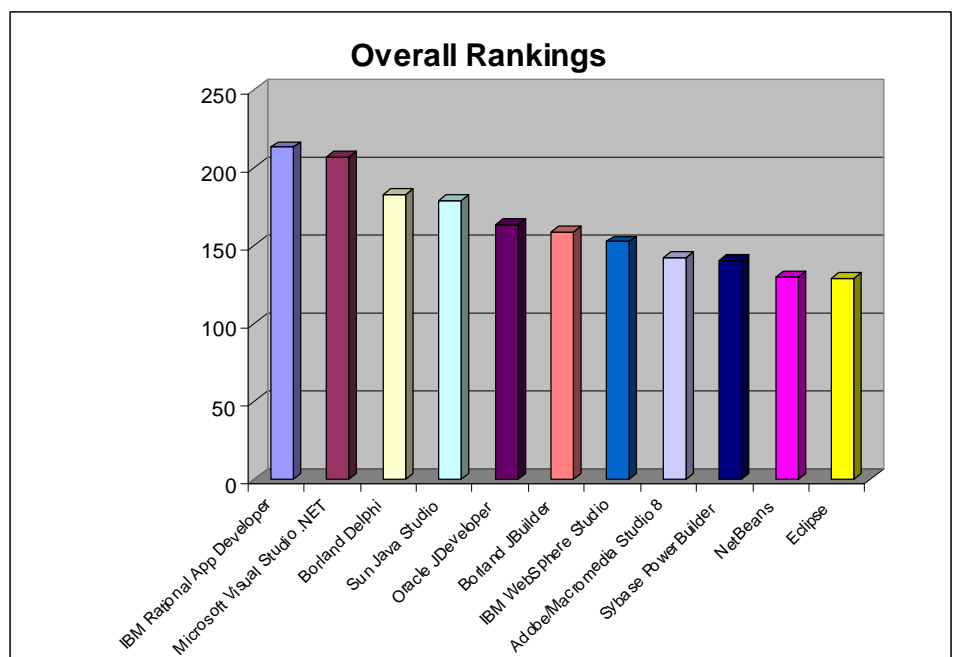
IBM's Rational Application Developer product received the highest overall rankings from it users. It received the highest ratings for Modeling and Design Tools, Documentation, the Make/Build function, and the Quality of Tech Support options. In addition it received high scores, though not the top score, in virtually every other category. Rational was a powerhouse of development tools when IBM bought the company and IBM has handled the acquisition beautifully, not letting the quality of the Rational products slip at all.

Microsoft's Visual Studio.Net got very close to the same rankings as IBM's product and had consistently good marks from developers in virtually all of the categories. Microsoft has the largest installed base, and largest and best established Developer Relations program, as well as a true dedication to the production of great development tools.

When Borland introduced Delphi in 1995, the Pascal-based IDE and tools was touted as the first RAD (Rapid Application Development) environment, and developers flocked to it. In the ten years since, Delphi has accumulated a large community of very loyal and dedicated developers. There are literally hundreds of newsgroups and forums devoted to Delphi, and a Google search will turn up 9.89 million hits. Delphi developers still love their IDE, as is clear from the excellent ratings developers gave in this study.

Combined Overall	Relative Ranking
IBM Rational Developer	1386.0
Microsoft VS.NET	1309.8
Borland Delphi	1302.1

Overall Rankings

Overall Rankings Cont'

The two Open Source IDEs, NetBeans and Eclipse, received the lowest scores, but this is due to their open and evolving nature. Open source applications are by nature dynamic and evolutionary. While they initially have a disadvantage to applications that are carefully researched, designed, architected, and produced by vendors that stand behind their products with support and service, the force of the community behind them will look at weaknesses as opportunities and they will be addressed in innovative and most likely powerful, ways. We expect to see both NetBeans and Eclipse improve their rankings in the next version of this survey.

Evans Data Corp
740 Front St.
Santa Cruz, CA 95060

Phone:
800-831-3080

Fax:
831-425-7913

website:
www.evansdata.com