

## **Insider's Guide to Pretty Printing Source Code**

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Welcome to the Insider's Guide to Pretty Printer. In the next few pages, you'll get all sorts of great ideas for debugging and documenting your Visual Basic programs. Pretty Printer prints program listings that are specially formatted to help Visual Basic programmers quickly identify programming errors and understand and maintain software code.

This Insider's Guide is aimed specifically at Visual Basic programmers. However, we understand that some programmers have the chore of explaining developer tools to manager-types. At the end of this guide are a couple of paragraphs you're welcome to "lift" in your task of educating management.

### **Pretty Printer Features**

\* **Connection Lines (NEW in v2.0!):** These are those lines you draw from an If to an EndIf and from a For to a Next. Connection Lines graphically connect the beginning and end of each control structure, literally drawing a line between both parts--thereby making it much easier for you to see how your program is structured. Programmers have been drawing connection lines by hand for years, but Pretty Printer is the first product for Visual Basic to automate this tedious, time-consuming, and highly error-prone chore.

\* **Selective Printing:** Programmers can choose which modules, Subs, and Functions to print, eliminating the need to print reams of paper to just see one particularly troublesome routine.

\* **Automated or "As-is" Indentation:** Developers no longer need to "clean up" their programs by hand. Pretty Printer will automatically format the printed code for maximum readability. Programming freedom is not sacrificed; as an option programmers can choose to have program code indentations printed precisely as they were entered.

\* **Procedure Breaks:** Procedures are natural "chunks" of a program. Pretty Printer will print procedures separated by a graphical dividing line or separately, one procedure to a page.

\* **Procedure Comment Detection:** Very often, programmers will document descriptions of procedures *before* the procedure begins. Pretty Printer is smart enough to detect when a comment related to a procedure precedes the actual code definition and print the comment along with the appropriate following procedure, rather than with the preceding, unrelated procedure.

\* **Informative Page Headers:** Program listings can have informative page headers for each listing, making it much easier to comply with corporate standards and to identify listings in meaningful ways.

\* **Formatting Options:** Visual Basic doesn't let programmers specify font, style, and size for programming listings. Aardvark's Pretty Printer does.

\* **Program Element Highlights:** Visual Basic programs consist of hundreds of special elements like comments (English descriptions of what the program's doing), identifiers (variables), keywords (special words in VISUAL BASIC's language), literals (special, predefined strings of letters), and headings. Pretty Printer gives programmers the capability of specifying their own unique fonts, styles, and even gray backgrounds for each program element. This makes it much easier to read and understand programs on a line-by-line basis.

\* **Color:** Users with low-cost color printers can print out their listings in color. Comments, identifiers, keywords, literals, and headings are all easier to read, understand, and locate when they're in color. Plus, the colors used by Pretty Printer can be identical to what's displayed in the Visual Basic editor—making it much easier for programmers to relate printouts to what's on their screen.

\* **Project File Handling (NEW in v2.0!):** In Pretty Printer 2.0, it's much easier to manage all the files of a given project in one shot. In earlier versions, if you wanted to print out a bunch of files in a project, you'd have to open each individually or do a multiple-select. Now, with v2.0, all you do is open the project file itself and you can work with the entire project at once.

\* **On-Line Windows-Style Help (NEW in v2.0!):** Pretty Printer 2.0 now has Help on the menu. Selecting the Help option opens the standard Windows Help system and provides you with full details on using all of Pretty Printer's capabilities.

\* **Orphan Handling (NEW in v2.0!):** This easy-to-use feature is another improvement to your printout quality. Pretty Printer 2.0 will not start printing a new procedure when there are very few lines left at the end of the page. Instead, it will begin the procedure on the next page. You have full control over the number of lines to require before printing a new procedure.

\* **User Interface Improvements (NEW in v2.0!):** While earlier versions of Pretty Printer had a functional user interface, there was room for improvement. We've created a color dialog that makes it easier to make selections. Version 2.0 also shows the printer name in several different places--making it easier for you to get at printer options. We've eliminated option buttons that had, uh, "odd" behavior. And we've made the View and Format options much easier to use and understand.

\* **International/Metric Margin Settings (NEW in v2.0!):** Our more worldly

users--those outside of the US and those who have a special love for the metric system--will now be able to use centimeters for margin settings.

**\* Bold Procedure Separator Option (NEW in v2.0!):** In earlier versions, the line drawn between procedures was only one pixel high--making it hard for those with tired eyes to see clearly. There's now an option in Pretty Printer 2.0 that will print a bolder line--so you can clearly see it without your glasses.

**\* Save Money with LAN Licenses (NEW in v2.0!):** Our LAN licenses are the ideal way to save money in larger installations. They start at \$995 for a 20-user license--a 30% discount off list price! Feel free to call Aardvark for more information.

### **How to Explain Pretty Printer's Benefits to Your Manager**

Program development is an extremely costly investment for most organizations, yet more and more custom programs are needed every day. The Pretty Printer makes it much easier for programmers to isolate and concentrate on specific areas of their programming, reducing the time it takes them to find flaws in their program code — thus reducing overall development costs and time to deployment.

Once a program has been released, cost for maintenance can be astronomical. When a programmer has to go back into old code (especially when it was originally programmed by someone else), it can take an enormous number of hours even to begin understand how the program is structured — way before any debugging can be started. Pretty Printer helps them clearly see how the entire program is laid out — or zero in on the structure of one troublesome routine.

Visual Basic is a “structured” programming language, designed to make programming more modular. In practice, this often means that the sequence of instructions to be executed is located “inside” the flow control statements (i.e., if-else-endif, while-end while, repeat-end repeat) surrounding them. That's great in theory, but in practice routines can get horribly nested, making it all but impossible to tell what If statement is connected to which Else or End If. For large programming efforts, the inability to see what statements belong to which control structures can become a nightmare of epic proportions.

Connection Lines (tm), a new feature introduced with Pretty Printer 2.0, graphically connect the beginning and end of each calling structure, literally drawing a line between both parts—thereby making it much easier for programmers to see how the program is structured. Programmers have been drawing connection lines by hand for years, but Pretty Printer is the first product for Visual Basic to automate this tedious, time-consuming, and highly error-prone chore.

### **Benefits of Pretty Printer for You and**

## Your Organization

Many programmers print out their code regularly. Some organizations even require it as part of their development documentation. But even those programmers who practice “on the fly” programming, writing their software on-screen only, can benefit from having Aardvark’s Pretty Printer in their bag of tricks:

**\* Debugging:** Sometimes, the only way to find that elusive program bug is to sit down with a full printout and carefully review the program’s structure, flow, and design. Nothing presents VISUAL BASIC code more clearly than Pretty Printer.

**\* Ergonomics and Comfort:** Even in this day of laptops and connected computers, some people just prefer the comfort of reading paper. Aardvark’s Pretty Printer makes it possible to print out clear program details to be read comfortably on the train, in the hot tub, on the couch, or even (heaven forbid!) on a camping trip. At first glance, this may seem like a silly benefit for such a serious tool, but if you’ve ever gotten a sore shoulder or a stiff neck hunched over a computer screen, you’ll appreciate being able to take a break — and still get work done.

**\* Pointing Things Out to Others:** It’s often much easier to project an paper printout on the screen when fancy display devices aren’t available. And it’s much more fun to point out sections of cleanly printed code to colleagues over a burger than it is to crowd into a tight cubicle.

**\* Faxing:** While many computers are equipped with fax modems, sometimes it’s just easier to stick a nicely printed page into a standalone machine and send it to a partner in another city.

**\* Delivering Projects to Clients:** Clients pay an awful lot for custom programs they commission. Developers can really look good by presenting their work to clients in a clean, colorful, nicely documented manner — only possible using Pretty Printer.

**\* Style Standards:** Many programmers have their own unique style of programming. In a larger organization, the variety in these program code styles can be highly disruptive. Aardvark’s Pretty Printer lets programmers program in their own style, yet also lets managers see, deliver, and share code all with a consistent look.

## Stay In Touch

I—Marty Tillinger, Aardvark President—would like to thank all our users for their feedback. Much of what’s in Version 2.0 is the direct result of user feedback. I’d personally appreciate your feedback on features you want in our next Pretty Printer release. I also want to know about bugs. I have this funny way of defining a bug -- if anything about the product doesn’t meet your expectations, I consider it a bug that we need to fix.

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