Statement on End-of-Life of Microsoft Visual FoxPro

Written by: Glenn S. Phillips, Sr. Consultant
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SUMMARY

Microsoft® Visual FoxPro® is a discontinued product. This has (or will have) a significant impact on companies that invested in this technology. The degree and cost of that impact will vary by company and industry.

Companies that continue to use Visual FoxPro for mission critical programs should be making plans for retiring these systems. Those with major systems (i.e., systems with more than six man-months of effort) should begin making plans sooner than later to allow adequate time for redevelopment, testing and deployment.

PURPOSE

This document is meant to answer questions about the impact to businesses by Microsoft's retirement of Visual FoxPro (VFP).

AUDIENCE

This document is primarily to assist **non-technical management.** It is intended to help explain the business impact, risks, and options stemming from the retirement of Visual FoxPro.

This document can also help **technical staff** better understand the current status and future issues, and, in turn, plan better and explain the situation to non-technical management.

THE DETAILS

Please note that our team believes Visual FoxPro is a great tool and through the years we have built very powerful, secure programs with VFP.

However, the realities of Microsoft's actions mean the landscape for development changed and <u>this MUST be understood by all businesses with investments in Visual FoxPro-based programs.</u>

Final Release and Updates

In March 2007, Microsoft announced that there would be no VFP 10, thus making Visual FoxPro 9 *(released to manufacturing on **December 17, 2004**)* the last commercial VFP release.

The support of Version 9 continued with service packs and "hot fixes" that were released December 8, 2005, October 11, 2007, January 25, 2008, and April 3, 2009. No more updates are expected.

While the patches have adjusted a few features and added some compatibility for things such as Windows Vista, the last major release of Visual FoxPro is over 7 years old, an eternity in the software world.

Ending Support from Microsoft

On **January 12, 2010**, mainstream support from Microsoft for VFP ended. Extended support from Microsoft is available, per policy, through **January 13, 2015** via the developer tools life-cycle support plan (*a paid support plan*).

At the end of the Extended Support phase, discontinued Microsoft business and developer products are no longer publicly supported. This means that there is no more paid support, no support assistance, and no further security updates from Microsoft.

Microsoft's position on retired products states ***"Customers are highly encouraged to move a supported product as soon as possible."***

Is VFP Going to Stop Working on 1/13/2015?

No, the end of extended support does not mean the program will stop working on that date, only that support will no longer be available in any form from Microsoft. At that point, development teams are essentially *"on their own"* and without access to VFP's source code that is often critical to problem resolution with the VFP systems.

Is There Something Wrong with VFP?

No, not from a feature standpoint and not from the capabilities the program provides for developing very professional, secure software programs. In many aspects, VFP remains one of the easiest and most robust tools for development of professional, data-centric programs.

The major contributing cause of the retirement of VFP is, in our opinion, that the Royalty-Free distribution, and lack of database licensing, gives VFP a poor (i.e. non-existent) on-going revenue model. The only real revenue for Microsoft from VFP was from sales of new versions, typically to just the developers.

When you couple this with the reluctance of the FoxPro Community to actually go out and buy new versions (VFP 6.0 is still the most widely used version of Visual FoxPro) it is not hard to see why Microsoft was not keen on tackling a major update or re-write of Visual FoxPro.

By contrast, other Microsoft development tools such as .NET often require use of Microsoft SQL Server for data programs. Installation of these programs often requires a separate, paid license of MS-SQL Server for each location or server. This is a revenue generator for Microsoft not required with many VFP database systems.

We Have Important Programs Written in Visual FoxPro. Do We Need to Do Something Now?

It depends. Candidly, this is really **more of a business decision** and not just a technical decision.

It is most likely VFP programs will continue to work well for several years. But that is not guaranteed. Consider the impact to your business or customers if there are operational problems with your Visual FoxPro programs. Can your business operations function well if there are problems with your VFP-based programs?

All software (like computers, cars, buildings, telephones, etc.) has a life cycle. This includes programs developed in all other software development tools too.

For all businesses, it is important to understand the life cycle process and plan for it accordingly. Like the eventual cost from ignoring the maintenance cost or age of your automobile, the growing cost of maintaining an aging software system does not go away by ignoring it.

At the same time, maximizing the investment is also prudent. The goal is to plan appropriately so that you minimize risks while maximizing the investment. This approach, when done well, produces the best outcomes over time.

Keep in mind that at some point, sooner or later, required programs written in VFP will have to be rewritten or replaced. The more elaborate the system, the more time redevelopment will require to be completed correctly.

To avoid problems, replacement systems should be planned projects on a schedule that is based on anticipated needs and the importance of avoiding problems for your business.

What Major Problems for Business Does This Retirement Create?

To be very clear: For most businesses, this retirement by Microsoft does not create immediate problems. And in most instances, problems that do develop will be gradual and relatively easy to ignore and postpone resolution. But <u>these assumptions are not a given</u> and <u>there are potentially serious risks</u> for businesses.

1. *Fewer Skilled Resources:*
   This is already a <u>major problem</u>. Smart, savvy software developers know that it is crucial to be skilled in <u>current and marketable technologies</u>. Therefore, the pool of all Visual

FoxPro programmers has diminished drastically and will continue to diminish. The pool of the very best VFP programmers has diminished the fastest.

Except for new programmers hired and trained specifically for VFP projects, new developers will not understand this tool or will likely not be interested in learning it. Most programmers that remain available for VFP projects will be those that have chosen to not stay current with technology (and, thus, may not be the software developers you really want working on your critical programs).

Many companies with strong VFP teams have already had significant programmer departures (to either other internal non-VFP projects or to other companies). These are often the best and brightest of the development team, lured away not only by money but by professional opportunity.

Teams left with only weaker or less experienced VFP developers will struggle further as these remaining developers had likely over-performed when they could rely on the now absent expert VFP developers for assistance and coaching.

Just as none of us want to use a cell phone the size of a brick or work in office buildings without air conditioners (both common at one time), professional software developers want to work in current environments and stay up-to-date with the tools of their craft.

2. *Potential Abrupt Changes:*
   A fear of many VFP projects now is that at some point Microsoft will issue a Microsoft Windows security patch or other Microsoft Windows update that "breaks" some aspect of Visual FoxPro. Such an issue could disable the program (or some aspect of it) immediately.

   In other words, there is a potential that running important (and often required) Windows updates on servers or workstations could cripple important VFP programs immediately.

   In the short-term, it is possible (but not assured) that Microsoft might follow such an issue with a patch to VFP to resolve the issue. However, this patch may not be available promptly (and once past January 2015, may never be available).

   Keep in mind, there is no longer a Visual FoxPro team at Microsoft to respond to issues. In the past, that team would have been available to investigate and resolve issues promptly. That team has been dispersed to other projects and is likely unavailable to resolve future VFP issues that may arise except for the most serious of problems.

3. *New Security Requirements*
   In our opinion, one of the biggest dangers would come should new data security requirements come to an industry that VFP may be unable to meet. In other words, VFP works as designed but that is no longer sufficient.

Technology changes faster and faster. So do security risks. In many industries, new rules and regulations are evolving related to security of information in database systems for customer information, financial data and medical records.

The combination of these factors makes it challenging to anticipate when a change may evolve that would impact the viability of any given VFP program. In such a case, the program may still work great but just fail to meet a new requirement for security, data-protection or technology integration.

In such a scenario, it is possible that the time-frame allowed for meeting the new requirement may be less than the time required to redevelop the program in other tools, such as .NET. This could result in fines and/or security risks. It would also create a costly project to address the issue, possibly even requiring a short-term project to meet a deadline, followed by a long-term project to redevelop the full program. A "crisis response" approach to development is usually the most costly and often VERY costly.

4. *Upcoming Versions of Windows*

While Microsoft Windows 7 appears to work well with VFP programs, there is no assurance that future versions of Windows will do so. Window 8 is under development and is expected to be released in 2012.

There are also suggestions that issues may develop with upcoming 64-bit programs and databases that interact with VFP programs and databases.

(32-bit and 64-bit refer to many aspects of computers and software, but essentially, 64-bit systems have become the more common in the most recent years and are able to process more data and process data faster than 32-bit systems.)

For example, the 2009 release of Microsoft Windows Server (Server 2008 R2) only works in 64-bit mode and most new computers running Windows 7 are running the 64-bit version of Windows 7. Thus VFP programs (which are 32-bit) will require compatibility mode to function and will no longer work natively. They are expected to work. They just won't be able to leverage the computing power available to other programs. This is a clear example that change is inevitable where VFP is involved.

Note: Additional discussion of 32-bit versus 64-bit operation is continued later in this document.

Are There Any Other Potential Problems for Business This Retirement Creates?

1. *A Finite Life of Programs:*

This issue is not as pressing as the problems above but will become so in time. Even though VFP programs may continue to function for years, there will eventually come a time that the cost and effort of maintaining a system based on retired software tools using the few remaining developers will no longer be cost effective or practical.

This is not an issue unique to VFP, but to all programs and programming tools. The retirement of VFP just makes this issue more obvious.

Just as there are still COBOL programs written in the 1960s that are still running today, there will be VFP programs running for many more years. As with COBOL, however, the cost of maintaining legacy VFP systems will be increased by the need of the systems to interact with newer technology.

The retirement of VFP means that there will be no VFP updates to take advantage of upcoming technology developments or meet possible future security requirements. However, if managed correctly, this will be a great time to leverage the power and security of new software and database tools.

2. *Perception:*

Perception is reality for many people and businesses. This is a problem now for VFP and will only grow in the coming years.

For VFP programs used only in-house, perception will likely only be an issue for companies wanting to hire (or keep) bright and forward-thinking developers, the very developers that would likely avoid accepting employment where much of the work is with retired tools they see as obsolete.

For firms that sell or distribute VFP programs this may create a problem of the software appearing to be dated and, by implication, obsolete. This will, of course, vary by industry and customer.

If a firm promotes the availability of the program's source code (the code the programmer writes) with a commercial product developed in VFP, the retirement means source code availability will change from an asset to a liability for the program (see "Fewer Skilled Resources" above) since developers are still needed to understand and modify the source code.

Please Note: Even if a customer's CEO or other management (or your management) does not care what tool the software is built with, that management will still likely ask for input from the technology staff or a consultant. The technology staff or consultant will likely recommend that the company consider more current technology than tools built with VFP (a tool that has not had a major update in over 7 years and will not be updated again).

Can We Just Convert Our Programs to .NET?

No. While .NET is now Microsoft's software programming platform of choice, there are no pure conversions to convert FoxPro code to .NET (or any other development tool).

Microsoft introduced a number of features to create subsystems with .NET components that can be read from FoxPro but this only provides the means for VFP programs to interact with .NET programs, not convert from one to the other.

Most major development platforms have very unique structures and systems. Even when a company claims they have tools to convert from one development platform to another (such as VFP to .NET, or C to Visual Basic) such conversion rarely works well and often creates a bloated and buggy program.

Redevelopment is the means for creating a stable program in current technology. This can also, if managed well, be a great opportunity to properly implement design changes and improvements.

Is VFP's Data Handling and Integration Capability Going to Go Away or Be Reduced?

No, VFP will continue to work handling data and interacting with its own databases and generally with other databases (such as Microsoft SQL Server) as it has before. However, problems interacting with other databases have already begun to appear.

Possible future data access limitations may come from changes in future version of external databases, such as SQL Server.

As more 64-bit programs and database systems are released, it is very likely new problems will surface regarding their interaction with VFP applications and databases, which remain 32-bit.

> ***Technical Aside*** *(i.e., some nerd-speak for technical readers)* ***-****Some new technical data access challenges that have already developed are:*
>
> 1. *The Visual FoxPro ODBC driver was last updated around VFP6 SP3. It was included in MDAC 2.5 and earlier and preinstalled on Windows 2000 and earlier. In order to use it on Windows XP and later Windows versions, it has to be installed first since it no longer comes installed by default.*
>
> 2. *The VFP ODBC Driver can be installed under 64-bit Windows but 64-bit applications cannot access the VFP ODBC driver because it comes only in 32-bit version. For 32-bit applications under 64-bit Windows a different ODBC tool must be installed and used and in many (perhaps all?) cases, systems that must interoperate with VFP must remain 32-bit.*
>
> *Note: Additional discussion of 32-bit versus 64-bit operation is continued later in this document.*

Will We Still Be Able to Create and Distribute Royalty Free .EXE Data-Based Programs?

Yes, this capability will remain available and functional. This is one of the strong cost advantages of VFP over many other database systems and development platforms.

Are There Plans for Visual FoxPro to Support 64-bit Versions of the Windows Operating System?

No. While Visual FoxPro will remain 32-bit and not natively use 64-bit addressing, it will run in 32-bit compatibility mode. This is important because Microsoft is moving aggressively to make 64-bit Windows the standard. The lack of 64-bit VFP means that VFP will not be able to leverage the processing power available to other 64-bit programs and may potentially have issues interacting with 64-bit programs.

> ***Technical Aside -*** *32-bit Compatibility Mode in 64-bit MS-Windows is not the same thing as the "Windows XP Mode" (which is really a separate instance of Windows XP running in a virtual computer).*
>
> *Programs operating in the 32-bit compatibility mode work in the same environment as the 64-bit programs. Windows just automatically adds a "translation layer" to shift program code back and forth "on the fly" to 64-bit code for the processor.*
>
> *This ongoing translation can impact performance as the translation must occur for all code and data the operating system passes on behalf of the program to/from the processor.*
>
> *You can install and run your VFP programs in Windows XP Mode was well but the programs would be isolated from other programs running on your computer. If the VFP program needed to interact with other programs, such as MS-Word, installed in your 64-bit environment, this approach would not work.*

Is Retirement of Software Tools Normal?

Yes, it may not be a frequent event but retirement is normal and expected of all tools as technology and markets change. COBOL, FORTRAN, BASIC, dBASE, and host of other software languages had "their day" and then retired, at least from mainstream development.

Sometimes an aspect of a language will surface in a new tool but it is not a continuation of the tool. For instance, VB.NET borrows keywords and syntax from Visual BASIC but is a very different tool requiring a major learning curve for even Visual BASIC programmers.

FoxPro has had an incredible lifespan but its roots are now 28 years old. Based on dBase, it began as FoxBase in 1984 and was purchased by Microsoft in 1992. The "Visual FoxPro" version was first released in 1995, with subsequent major releases in 1997, 2000, 2002, 2003 and 2004.

As Often Requested by the Remaining VFP Development Community, Will Microsoft to Release VFP as Open Source?

There is no reason to believe Microsoft will ever release the VFP code publicly and a variety of logical business reason why they would not realistically consider such a move.

VFP algorithms are used in other important Microsoft products and are considered important intellectual property by Microsoft. Furthermore, releasing VFP as open source would likely create completion for other Microsoft products. These two issues alone are a strong disincentive for releasing the code as open source.

What if I Have More Questions?

There are a number of resources available on the Internet related to VFP and new software development platforms (although the number of VFP-related resource is dwindling).

You should also feel free contact this document's author, Glenn S. Phillips at **Forté Incorporated** (**www.ForteOnline.com**, **(205) 985-1111**) to ask questions or to discuss how this change by Microsoft may impact your business and how to plan for success in the future.

Conclusion

Although retired as a product by Microsoft, Visual FoxPro is still a very powerful, functional tool for developing professional software. As time passes, however, the viability of this tool will degrade and businesses should be prepared in advance with a plan for the future.

About the Author

Glenn S. Phillips works with business leaders to leverage technology and to address hidden risks within.

Glenn and his team do this through assessments, consulting, custom software design and development.

He is the president of Forte' Incorporated, and has been recognized for technical innovation and business leadership by a number of organizations, including Microsoft, Dell, Harvard University, Auburn University and various media outlets.

A regular guest speaker and source for national media, he is also the author of the book *Nerd-to-English: Your Everyday Guide to Translating Your Business, Your Messages, and Yourself*. The book, as well as the website **NerdToEnglish.com**, focuses on bridging the often hidden communication gaps that put businesses, careers and relationships at risk.

Forté Incorporated

Forté Incorporated provides advisory services to business management as well as design and development services for custom software and data systems. Among the numerous awards for innovation, the firm has been awarded as Microsoft Partner of the Year for Data Management Systems.

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