

Top 10 Myths of Upgrading FIX32 to iFIX

Myth #1: Before you can upgrade to iFIX you have to re-assess your whole system design and re-architect it to "take advantage" of the features in iFIX.

This is the single most common misconception in system upgrades (even GE engineers have repeated this myth) and it is probably the biggest reason why customers put off or avoid upgrading a system. The simple fact is that whether you are running FIX32 pictures using "Classic Desktop" or importing and upgrading them to iFIX pictures, the architecture that is working for you today will work after the upgrade. Some features may not be present, or work differently, in iFIX than in FIX32, but a good system integrator should be able to make this transparent.

So, why do we hear this misconception so frequently? While some of the reasons are discussed elsewhere in this document there is another that is more subtle: Integrators and end-users look at an application through very different "lenses". Most integrators see an application as a set of programming functions and methods, while end users are focused on the application functionality. This difference between the "how" (integrators) and the "what" (end users) leads to a basic miscommunication that results in an overly-complex upgrade. For example, an integrator might look at the VBA code from doing a straight upgrade from FIX command scripts and see (not entirely incorrectly) a poor architecture that is hard to maintain and that violates well-established guidelines for good programming practice. It "works", but he will want to "fix" the system and re-architect it so that the code will be neater and easier to maintain. The end user, meanwhile, if given the opportunity would see an application that "works" regardless of the architecture.

He doesn't care if it's hard to maintain, or if it isn't pretty. What matters is that the system works. And if the old system worked fine then why "mess with it."

This does not mean that you should not be concerned with good architecture or that you should not redesign parts of a system. You just need to make sure that your goals as an end user are well understood and that, as an integrator, that you keep focused on the system requirements.

Myth #2: The VBA scripting is completely different from the FIX command language. Except for the simplest FIX command scripts, upgrading a system can be expensive, takes forever and is "buggy."

It's true that VBA is vastly different than the command language (thank G-d! many of us would say!). Unfortunately, it leads many people to believe that beyond a few simple scripts which are easily upgraded, anything more complex requires a complete redesign. The simple fact however is that because of the tight integration of VBA within iFIX a good integrator should be able to quickly identify any scripts that need to be rebuilt and

determine alternatives during the evaluation phase of an upgrade. For example, at EVSystems Data Solutions we have developed custom tools that enable us to readily identify problem areas during the evaluation phase so that there are no surprises during development and testing.

Myth #3: There are features missing in iFIX that prevent users from migrating.

Unfortunately, iFIX does not have 100% of the features in FIX32. For example, iFIX doesn't support statistical data charts (XBar, RBar, Std. Dev., etc.) and the "while down" button event isn't available. While the lack of these features prevents a "one click" upgrade, a good system integrator should have alternatives that will provide the same functionality. If there are no acceptable alternatives, there is the option of using the "Classic Desktop" feature which lets you display screens in their native format using the same FIX Draw and View applications.

Myth #4: We don't need to upgrade and we don't see any need to in the future. Our system runs fine and we don't need any of the advanced features in iFIX.

Unfortunately, as computers age and equipment breaks down this is no longer true. Unless you had the foresight to purchase spare computers and kept copies of all software and license disks when you installed your system you may run into problems if you need to replace a computer due to simple mechanical failure. You may find yourself forced with upgrading your system just because it's hard to find a PC that will support the legacy operating system (e.g., Windows 98 or NT), I/O drivers, or other components. That being said, the availability of "Classic Desktop" can make a hardware forced upgrade relatively painless. (See below)

Myth #5: The application won't look or feel the same after the upgrade. We like the way it operates now.

This was truer a few years ago before the availability of the Classic Desktop in iFIX. But, with Classic Desktop users open the same files in upgraded versions of FIX View, FIX Draw and the tag group editor. Since Classic Desktop uses the same Command Language scripts there is 100% compatibility after the upgrade. So, from an operator perspective the system will run and look exactly the same; only most likely faster due to it being installed on a faster machine.

Myth #6: Upgrading is an "all or nothing" option. We can't progress in phases.

As with the previous Myth, this was truer before Classic Desktop. But, now users have the option of upgrading as their application and needs demand. It's entirely possible to have parts of the system using iFIX pictures and others using the classic FIX View pictures simultaneously. Moreover, since FIX Historical Display (HTD) can now display data from the GE Proficy Historian you can now extend the Historian to your FIX View displays.

Myth #7: Validating and verifying any system change is expensive, but V&V of an iFIX upgrade is cost-prohibitive.

This is actually one of those areas where the tight integration of VBA with iFIX can be extremely beneficial. Normally, any V&V of a system upgrade might require many hours of painstakingly reviewing code and object properties. And, if you were to do this by hand it *would* be prohibitive. But, just as one can write a macro in Excel to automate repetitive tasks you can write tools in iFIX to automate script upgrades and to create a self-reporting system. Moreover, these same methods can be used to actually reduce project scope and unnecessary work. For example, we were recently tasked with helping a client upgrade a system with over 2,100 pictures. As part of the upgrade we developed custom tools which created a cross-reference database of all active pictures, which were being called by which and—most importantly—which pictures were no longer even being used. We quickly identified over 1000 “orphaned” pictures which we could safely ignore during the upgrade and several hundred others which could be consolidated into a handful. In a few hours we reduced the scope by almost 50%!

When we consider the impact of creating centrally-managed scripts and other automation tools the final implementation and V&V cost of an upgrade can be significantly less than many users expect.

Myth #8: The effort involved in an upgrade is so great that one might as well consider ripping it out and replacing it with a competing HMI/SCADA product.

Hopefully, by this point you should see that the upgrade effort is not as extreme as many presume (or, perhaps that some sales people suggest). More importantly, leaving aside the differences between different HMI/SCADA products it should be clear that a “rip and replace” is significantly riskier course of action that should not be undertaken lightly without considering all of the ramifications. Assuming that you have a tool to import the FIX32 graphics, scripts, database, etc. to the other product you are still stuck in a “no man’s land” of technical support if there are problems. (Or, even worse, you may discover expensive roadblocks with few alternatives available.)

So, while we have all felt at one point or another that it would be easier to just “... rip the @\$#@#\$ stuff out and start over!” our recommendation is that this is a good time to take a break, step away from the computer, get some sunshine and allow a few moments for a clearer perspective.

Myth #9: I have to be a VBA wizard to upgrade to iFIX.

While we have emphasized the benefits of extending iFIX with custom tools to automate the upgrade process there are some very good tools already available from GE to simplify many tasks. For example, there is a script import tool which upgrades the most common FIX command scripts to VBA such opening and closing pictures, operating digitals and so forth. There is also the developer download section of the GE website¹ which has a wealth of free utilities developed by application engineers and system integrators. In fact, since the “source code” is freely visible with these tools they are an excellent way of learning VBA and seeing how others have used the iFIX object model to simplify many tasks.

So, yes, while a little knowledge of VBA can greatly simplify upgrading to iFIX, there are many tools available than can do much of the work for you.

Myth #10: There is no real benefit to upgrading. I’ll do it if I have to, but iFIX doesn’t offer my organization any compelling benefits.

In truth, you know the answer to this question better than we. Depending on your business and how you use FIX, iFIX may not offer any significant benefits. However, it is worth noting that if only one feature of iFIX is able to lower your costs or improve an import key performance indicator (KPI) then the upgrade may be worthwhile. How can iFIX lower costs or improve KPI’s? Some areas that come to mind are:

- Better communication and visibility with corporate MES/database systems (VisiconX)
- Integrated historical and real-time data (Trending)
- Integrated Windows Security
- Reduced development costs and deployment costs (Dynamos, Change Management)
- Time and event based actions (Time & Event schedules)
- Integrated batch management (Batch)
- Web integration (Portal and web ActiveX interoperability)

These are just a couple of the benefits of iFIX. You are the expert of what works for your business and what features can help to reduce your costs and improve your competitiveness. If the system you have in place meets your needs, fantastic! But, if you should see areas where it can be improved, then an upgrade to iFIX may be an option worth considering.

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http://support.gefanuc.com/support/index?page=dwchannel&actl=DEVFIX_TO_IFIX_MIGRATION_TO_OLS_TYPES&cat=DEVFIX_TO_IFIX_MIGRATION_TOOLS_TYPES