

Fall 2020

The Current and Future State of Computing Platforms for LDAR Program Management.

Desktops and Laptops:

Windows PCs, since the very earliest days, have been built around micro processors manufactured by Intel or AMD, based on the Intel x86 CPU design.

For many years the Apple Macintosh, by contrast, used the PowerPC CPU created by the 1991 Apple–IBM–Motorola alliance, known as AIM. In 2006 Apple changed its Macintosh line of desktop and laptop computers to use the same Intel x86 based chips that were being used in Windows PCs.

So today, regardless of which company manufactured your desktop or laptop computer the design of the chip is based on Intel's 'x86' family of processors.

LeakDAS V5 runs on x86 Windows based computers. There is no MacOS version of LeakDAS due to significant differences in the operating systems despite them both being x86 based.

Smartphones and Tablets:

ARM, previously **Advanced RISC Machine**, is a family of reduced instruction set computing (RISC) architectures for computer processors first introduced in 1985 that has become the standard architecture for mobile and low powered computing devices.

Nearly all current smartphones and tablets (such as iPad or Kindle) use microprocessors that are ARM designs, whether your phone is running iOS or Android it's operating system and apps are being executed by an ARM processor.

LeakDAS Mobile 8 runs on ARM based Android devices and on some x86 Windows based mobile computers. LeakDAS Mobile 7 runs on an older "Windows Mobile" platform that Microsoft no longer supports.

The Coming ARM Hegemony:

Just as Apple switched from PowerPC to Intel in 2006, the company has announced this year that they will change chipsets again, this time to ARM. Apple will release the first Mac with ARM processors in 2020, and it expects the complete transition to take two years. After that, all Apple computing devices, phone, tablet, laptop and desktop will use the same family of ARM processors.

How Does This Affect Windows?

Microsoft isn't far behind Apple in the move to ARM processors. The low power requirements and cool running design of ARM chips make them ideal for portable, battery powered devices like the Microsoft Surface family of laptop and tablet computers. To take advantage of these properties of ARM CPUs Microsoft is creating an ARM based version of Windows that will ultimately replace the current x86 version you are using today.

When this transition of Windows from Intel based chips to ARM based chips is complete your current Windows apps will no longer be able to run natively on the new computers.

What Does This Mean for LeakDAS?

Today? Not a lot. But eventually it means that the LeakDAS app that runs on your computer today will not run on your shiny new laptop computer, even though that computer is running Windows. Well, that's not entirely true. You will be able to run it but only in what's called an 'emulator' that will convert the instructions from x86 to ARM so that they can run on the new computer. That's not a very efficient process and the application performance will suffer. But not to worry, InspectionLogic is thinking ahead, today, to what devices and platforms your LDAR management software needs to support in the future.

Can't InspectionLogic Just Make a New, ARM Compatible LeakDAS?

We could, and we might, but eventually all enterprise computing is going to move to Cloud based apps that run in your web browser and don't care what OS or chipset you have. Writing an ARM based LeakDAS would be an

expensive and time-consuming task so we must look seriously at what the market for desktop, locally installed apps will be in three, five, or ten years, all the experts say there won't be much demand. Additionally, we don't like to spend our development dollars on things that don't improve your experience and make your job easier, just supporting new chipsets doesn't meet that standard.

What About SkyBridge?

SkyBridge is a Cloud based web application for LDAR that can run on any computer, any laptop, any smartphone, now and in the future. Additionally, SkyBridge has an application programming interface (API) that allows SkyBridge to interact with all the other tools you use to manage your LDAR program, whether those tools are enterprise class systems from global companies like Salesforce and Oracle or they're bespoke tools supplied by your LDAR field contractor. Because SkyBridge lives in "The Cloud" it can be accessed from anywhere that you have an Internet connection. That's particularly valuable now when so many of our customers are adapting to work-at-home policies that make adequate security measures difficult to maintain and limit their access to the tools they need to do their jobs.

What Can I Do?

You can start by telling us what's important to your LDAR program operation. We'd like to hear from you, and you can email InspectionLogic Support at any time with questions and suggestions about our development roadmap. Because we're precluded from doing in-person meetings to show you our newest products and features we're also planning on holding one or more virtual events later this year. If you have suggestions for the timing and content of these events, we'd love to hear from you.

If you want to schedule a live demo of SkyBridge for your organization, we can set up a Microsoft Teams meeting or GoToWebinar webcast to show you what SkyBridge can do for your LDAR program.