By Joel Leininger, LS

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The Digital Divide

When our firm bought its first ink-jet plotter some 10 years ago, I asked the vendor's representative what sort of guarantee came with respect to the long-term adhesion of the ink on the Mylar. After all, many surveying records are kept permanently, and technology does not affect whether the records are important or not. (And we have had promises of technology in the past that fell a bit short of the mark. Remember "age-less" Mylar, the earliest examples of which are all sepia-toned now, with ink chipping off?) I was told that the ink-jet image was warranted "for a full five years." Well, that was a relief! When I pressed him for the rationale behind such a short life span he replied that most users of drafting technology did not require permanent imaging, because the product being designed had no such life span. He was right of course; no one needs the design of a widget after it has ceased being used. Of course, we surveyors don't fit that mold; our "designs" have no expiration date, and as a result we are interested perpetually in those drawings. But we comprise only a tiny percentage of the drafting technology market; hence, our needs are an afterthought to the technology vendors. Happily, the ink is still on those 10-year-old plats. I'm keeping an eye on them.

Digital Memory

We face a more insidious problem. The digital age has ushered in digital files as our new "institutional memory." Think of them: coordinate geometry, digital terrain model, field data collection, vector drawing, image, word processing, financial, spreadsheet, database, etc. Digital files are everywhere in the modern firm. They hold the bulk of our "knowledge" of a particular area, yet little attention has been paid, generally, to their longevity. For this discussion, let's set aside the issue of physical safekeeping. No one really knows how long those user-burned compact disks will remain readable, but that is a discussion for another day. Let's focus on the programs necessary to read the files.

> ## " Permanent records must have a permanent means of access."

All organizations which have been generating digital records for any length of time have faced the problem of obsolete file formats. Can anyone open a WordStar document anymore? How about a file from COGO packages of the '80s? If we claim that those records have permanent value, yet we allow access vehicles to become defunct, one wonders how we define value. This is a serious problem already, and will only get worse as more software packages fall by the wayside.

OpenDocument

Of course, this problem is not limited to surveyors. Few in the general public are aware of the unfolding drama in Massachusetts caused by then Chief Information Officer Peter Quinn mandating the use of "OpenDocument format" (.odf) for all State word processing documents. OpenDocument is a format promulgated by OASIS, an international standards-setting consortium of major software and hardware vendors, and incorporated into a number of office suites. Its primary advantage is that the format is owned by no single vendor, and longevity of access is a prime consideration in its future development. Quinn's argument was and is that permanent records must have a permanent means of access. Absent such means, permanency is a sham. As important, vendor-neutral formats foster choice in software selection at the consumer level, eliminating "vendor lock-in." Microsoft Word has one of the worst track records for file compatibility across versions, primarily due to Microsoft's business interests in inducing users to continually upgrade to the latest version. Since most Massachusetts State desktops now run Microsoft Office, and since Microsoft has rejected (for now) any notion that it support the format, change is afoot in the Bay State. As you

might expect, other governments are watching closely.

I'm guessing here, but there have probably been 30 commercially available COGO packages since the advent of the personal computer in the early 1980s. There are perhaps 10 remaining which command 95 percent or more of the market. If you are one of the unfortunate owners of a now defunct package, the chances are that you have data files which are, at least in part, unreadable by your current software. Although most every COGO package could import and export ASCII coordinate lists, few bothered with ancillary files. How about those triangular irregular networks? Sets or linework files? Early field data collection? To the extent that those files were necessary to gain the full benefit of the original work, it is likely they are still. And yet, they remain cloistered.

If there has been a serious attempt at standardizing surveying file formats, it has escaped my notice. Can we agree that standardization is in everyone's best interest? Surely both vendors and consumers of music compact disks recognize the utility of having every disk play in every player. Not having to worry about whether that electric outlet is 60hz or 50hz simplifies buying appliances, reduces the risk of fire, and removes at least one worry from the mother of every nine-year-old boy. Why must surveyors settle for this Babel of formats?

Least Common Denominator

Absent agreement among the vendors as to the most effective file format for working files, we at least ought to have agreement on a file transfer standard. For instance, genealogy programs internally store data in a manner different from one another, but they all import and export GEDCOM files. Although not perfect (there are several GEDCOM variants), this ability simplifies transferring data from one package to another. COGO ASCII files are a good first step; other types of files need similar treatment.

Our files have permanent importance which apparently has escaped the notice of the industry. These sorts of standardization efforts are only effective when impartial organizations take a lead role in seeing the task accomplished. NSPS is in a position to address this issue. Can our descendants count on it? 𝒜𝒮