

The hidden cost of EDA

Finding the right tools is one challenge, but the task of managing their licenses is often overlooked, says **Guy Haas**

There must be a better way to keep track of electronic engineering software licenses. EDA tools are very expensive, essential to R&D work, and must be properly maintained to ensure that commercial designs are completed on-schedule. Nevertheless, companies traditionally set aside little management time to put formal control systems in place for these assets.

Consider the scale of the investment. A single license or seat can cost \$50,000, sometimes much more. Gartner Dataquest estimates that manufacturing companies spend 1-1.5% of annual revenues on product development software. This figure is almost certainly higher for electronics companies that depend on very complex tool applications for functions such as design, synthesis, verification and physical layout.

So let's look at some of the challenges in implementing effective license asset management and how they affect senior staff among the various disciplines involved in that process.

Trends

Typically, a company has bought a perpetual tool license and subsequently paid for maintenance (at a ballpark annual rate of around 20% of the original purchase cost). This is still the most common model, although vendors are today pushing several alternatives.

There are time-based 'subscriptions'. Some of these allow the user to 'remix' license counts quarterly or half-yearly. Another offshoot still is the 'debit card' and this allows the client to access tools on an hourly or even daily basis, with usage then deducted from the card. However, this option has tended to prove especially expensive and is thought to be in decline.

A further variation is 'application tokens'. The user buys a package of tokens, each application requires x number of tokens to run, and while those tokens are in use, they are otherwise considered to be 'out of the pool'. The tokens are controlled by a time-based license.

Many companies find some form of subscription appealing even though it may prove more expensive than a perpetual license over, say, a five-year period. There are several reasons for this.

1. Subscriptions use expense dollars, which is sometimes easier money to come by, depending on internal accounting procedures.
2. They offer flexibility in today's volatile design environment. As needs change, so can the mix of licenses and tools deployed.
3. They can be more easily charged to a particular project or program, particularly useful where the user is providing third-party design services.

The downsides of subscriptions are complex license administration and expiring license keys. By definition, time-based licenses



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expire and when they do so, the tool shuts down – a disaster should it occur in the middle of an important project. Therefore, keeping close track of keys and expiration dates is critical.

Another factor is the need to maintain documentation for license compliance, and the infamous Sarbanes-Oxley legislation sets particularly tough requirements here. A company may be asked to show compliance with various vendor license agreements. Today, however, such agreements are typically signed, and filed

away in the legal department, meaning that the people who actually manage the related software on a day-to-day basis do not usually have easy access to them.

In this context, it is also not unknown for disputes to arise between vendors and their clients over instances of 'accidental' piracy, where access to tools above and beyond the terms of the agreement has taken place. While this rarely leads to legal action, it can nevertheless sour future relationships between the companies, even though the source of the problem is almost always ignorance rather than skulduggery.

Specific challenges

Problems in managing license assets arise in different ways. There are the issues presented by data proliferation, a lack of data sharing, data loss, the absence of timely alerts for expiring keys, inadequate license asset reporting, and difficulties securing access to binding license agreements.

Data proliferation results from the sheer amount of data related to managing licenses. Consider this simplified list of the possible human components in a chain: vendors, resellers, and internal users. Then add the paperwork: license agreements (which could

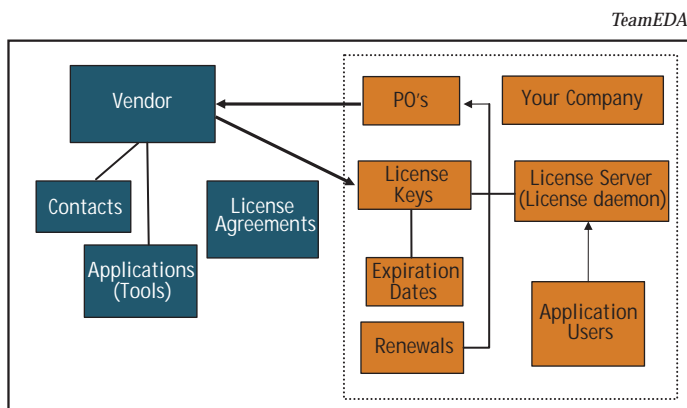


FIGURE 1 License management relationships

take up to three forms per vendor - perpetual license agreements, subscription license agreements and maintenance agreements), purchase orders (POs), license keys, expiration dates, license servers and so on.

There are many people (say, between three and five at least) who need this kind of information, so each inevitably creates and maintains his or her own spreadsheets, Outlook files, and other paper folders. Not surprisingly, the information all these hold is seldom in sync. Most often, there is no sharing of this data either.

Reality hits hard when someone who has built and maintained these files, leaves the company. It is entirely possible that a company's most critical license asset information disappears overnight. Alternatively, while an expiration may be critical if a license key shuts down and halts a whole project, it is arguably just as important that the user knows when to start renewal negotiations with the vendor. If one waits too long, the vendor has a decided advantage. If the user starts earlier, he or she has the advantage.

Then there are the issues of knowing whether a tool should be renewed or not and what maintenance it requires. This is best gained through some visibility into how software is being used and by whom. Formalized asset management can deliver these usage metrics, perhaps reducing your software outlay considerably.

So consider how well your company can currently deal with these issues. As an exercise, ask yourself how quickly could it prepare a license management report. Its typical components would be the current license inventory; the license server inventory; the maintenance, expiration and renewal status; cost estimates for renewals falling due; and POs by vendor - all with appropriate contact details. No doubt reports of this kind can be prepared given enough time and effort, but if they are needed immediately - well, it might not happen.

Meanwhile, also ask yourself this. Should you urgently need to see the terms and conditions (T&Cs) governing one of your application licenses, do you know right now where to find the full agreement and how to retrieve it?

The reality

We have interviewed a number of executives with direct responsibility for CAD software license asset management. In that process, it became clear that haphazard combinations of spreadsheets, business cards in a drawer, and other informal types of documentation are common.

All the executives admitted that it required a lot of work to maintain the data, that 30% of it was still probably wrong, and that they did not share their personal versions of the data with others in their companies.

Few, if any, had an automated expiration alert system, and instead relied solely on a manual scanning of relevant documentation.

Some would even wait on vendors to notify them that a license key or maintenance agreement would soon expire (lead times on such notification averaged about three weeks) but that even then about a third of their suppliers provided no advance warning of expirations whatsoever.

A few companies have developed, or attempted to develop their own software to track and manage license assets. Those companies have spent many man-hours and dollars creating and maintaining these tools. But what if one could acquire a tool specific to engineering software license asset management at a tenth of the likely cost of writing one in-house?

Regaining control

Our company, TeamEDA, is one of a number coming into the market with such a product. Our offering is called License Asset Manager and is specifically targeted at the needs of the engineering sector to the degree that it was developed with three large manufacturing companies (one in electronics, one in defense, and one in mechanical engineering).

As an example of what is available, it has features that consolidate, enable the sharing of, and protect license asset information. It uses a client-server architecture, based on popular and reliable web-server components.

So what, in broad terms, should be the objectives, content and function of such asset management systems? We have seen why senior engineering staff must be held accountable, and take more responsibility for managing these expensive company resources.

Accurate and appropriately available information is crucial. Achieving the right focus here will lead to improved control. Control leads to reduced costs, which will lead to increased profits. Saving 10% of these costs will go straight to the bottom line, and this could be a big number.

The value proposition for any asset management approach should therefore be based on:

Reduced license asset costs

- Know what license assets you have and where they are.
- Get an earlier start on license renewal negotiations.
- Know how to shift licenses around the organization to balance demand, instead of just buying more.

Uninterrupted application service

- Know when application license keys will terminate.
- Prevent software from shutting down unexpectedly.

Better expense planning

- Generate a history of license expenses.
- Know when renewals are likely to fall due and their probable cost.
- Generate a history of license usage.
- Know what tools are 'live' and which are not, and identify where fewer licenses may be required.

License agreement compliance

- Ensure appropriate and easy access to vendor T&Cs.
- Ensure Sarbanes-Oxley compliance.

Reduced administration time

- Work off a single consolidated data source rather than many different ones.

Protection of license asset and contact information

- Store material in a secure environment.

In our view, the return-on-investment for an infrastructure that offers all these features can be measured in weeks, not months or years. If you do not have such a system in place, it is past time that you started looking for one.

Guy Haas is president and founder of TeamEDA. More details about LAM and its other products are online at www.teameda.com.