

The “Business side” of License Management

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Abstract

Managing expensive engineering software, across the enterprise, is more than just monitoring usage, and studying utilization statistics of “features”. This white paper addresses the business side of managing License assets, and describes a “total management system” for engineering software. Managing the business side effectively can further reduce engineering software costs, provide more “business intelligence” for making better decisions, improve responsiveness, and insure Software License use compliance. We will look at the business elements of License management and why they must be considered a part of the management process.

Introduction

Engineering software is generally expensive and available in all types and forms: concurrent/networked (meaning shared), pay-per-use, Node-locked, User locked, Shrink-wrapped, and dongle keyed. There is a movement away from the single-User Licenses to shared Licenses. Shared License management is maintained (not necessarily insured) through FLEXlm, LUM, elan, Sentinel, Clearcase, etc. Shared License restrictions can be LAN, scaled LAN, WAN, scaled WAN, and even hybrid variations there of. The right “Mix” of License type depends to a great extent on usage patterns, trends, and cost. Node-locked, single User Licenses are much cheaper, than LAN or WAN, with Global WAN being the most expensive. It is imperative that Management choose the most economical mix, while still providing availability to Engineers, when they need the application, to meet Project requirements. I provide some optimization strategies below. Utilization metrics can certainly help, but it is not all that must be considered. Without accurate and up to date business intelligence, one can not prepare well enough for negotiations with the Vendor, and make the best decision for the Company.

Vendor relationships

Vendors are the producers of the Tools that are needed by Engineers. You can't design electronic or mechanical products without them. The number of Vendors and the array of Tools available is staggering. There are hundreds of Vendors and thousands of Tools to choose from. It is typical in a high technology product Company, to spend 1-1½ % of sales on these tools (Dataquest). The Tools are very sophisticated software programs and can cost tens of thousands of dollars for a single User License.

A sampling of Vendors and number of Products (Tools):

Electronic engineering (EDA)

Cadence (108)
Mentor (194)
Synopsys (95)
Agilent (13)
Denali (23)
Magma (28)
Synplicity (9)
Eve (10)
Novas (14)
Sigrity (10)
Tensilica (6)
Verisity (16)
Xilinx (12)
Altera (5)
Clisoft (8)
Avery Design (4)
WindRiver (28)

Mechanical engineering (MDA)

PTC (113)
Dassault (64)
MathWorks (72)
MSC (22)
Abaqus (7)
AutoDesk (85)
Ansys (40)
Altair (29)
Fluent (12)
Simula (4)
Ansoft (17)
Altia (3)
Appwave (7)
Flomerics (17)
Hyperion (11)
Rational (51)
Siemens (33)
Telelogic (15)

Each Vendor has a set of Contacts (Sales Rep, Application Engineer, Developers, Accounting, Management,...). Each Vendor has its set of “Agreements”. Each Vendor has its unique set of License keys, daemons, and license file formats. Each Vendor negotiates differently and will offer different “throw-ins”. Moreover, there are typically more than one person dealing with Vendors in a Company. So how can you keep all this information readily available, Vendor by Vendor, PO by PO? Typically, much of this

information is missing or scattered across numerous departments and/or people on spreadsheets. If that person leaves the Company, that information can disappear. A word to the wise!

License Agreements

Whether you use perpetual, subscription, standalone, or shared, you are purchasing the “right to use” the software. You are bound to a License Usage Agreement accepted either by a “click”, when you open the wrapper, or by a signed Contract. Shared licensing schemes almost always require a signed Licensing Agreement, which defines how, where, and when you can use the software, as well as Customer rights, Vendor rights, and reporting requirements. The Vendor may require the Company to sign multiple Contracts: a Subscription Agreement, a Perpetual Agreement, and/or a Maintenance Agreement. The Company may also sign an NDA (Non-disclosure Agreement). The Company is bound by the terms & conditions in these Agreements. It is fair to say that Tools Managers, Engineering Managers, IT Managers, the people who use and manage the software, have never read these, have no idea what is in the Agreement, or what the terms of use are, but yet they must be accountable. Executive Management should be a little more than concerned.

License Compliance

Sarbanes Oxley law, stricter accounting practices and recent copyright litigation has increased the likelihood of audit of your engineering software inventory and usage. An audit can come from internal Finance, or from Vendors. A recent study suggests that approx. 20% of software Customers are audited each year. Auditors are looking at quantities in use (vs. what is purchased); restriction type in use (LAN, WAN, or variations thereof, vs. what was purchased); adherence to license control mechanism: FLEXIm, node-lock (Host ID), User-locked (User name), dongle key; and adherence to terms and conditions of the License Agreements. Since non-compliance can be costly, embarrassing, and time consuming, having a way to control and validate that you are compliant is imperative. Elements of Compliance:

- Does quantity in use match quantity purchased?
- Does license key contain all features purchased?
- Do expiration dates in the License key match the PO time period?
- Does the restriction of use (LAN, WAN...) match the PO, and the Agreement?
- Do Temp licenses have expiration dates, and “\$0”?
- Are Cost Centers charged accurately?
- Are usage bill backs accurate?
- Is the approved production version being used?
- Are the terms and conditions of the Agreements being met?

Subscription Licensing

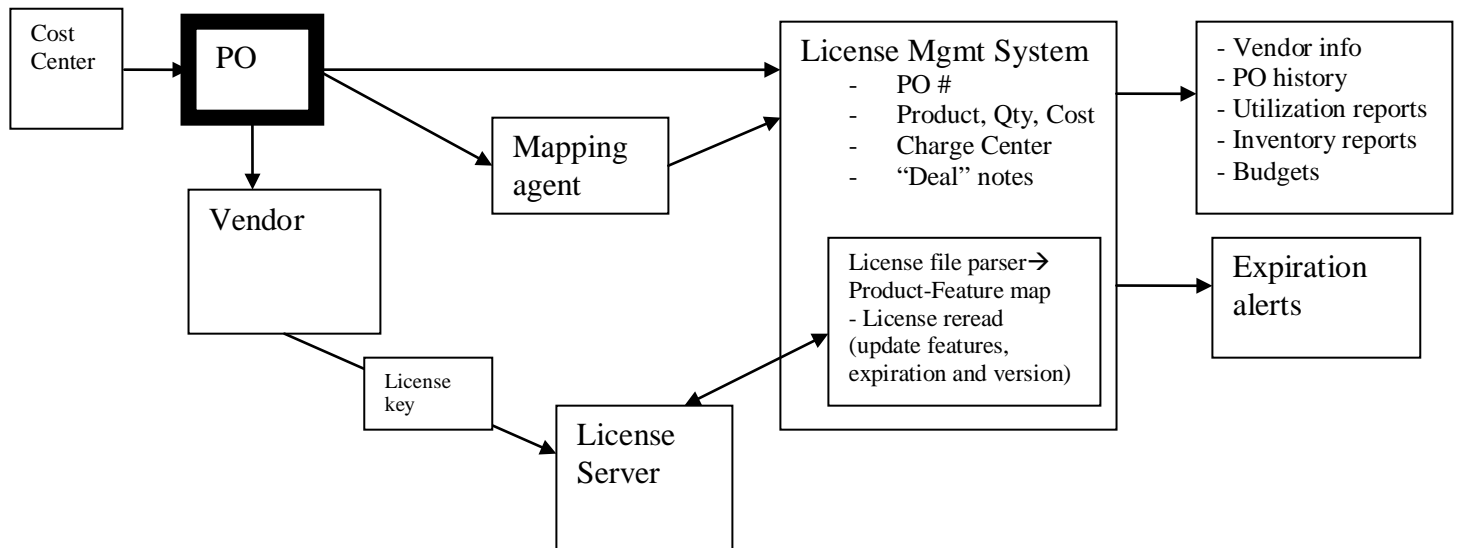
Traditionally, engineering software tools were acquired by purchasing a perpetual-use license, and purchasing annual Maintenance. Vendors have pushed Customers to Subscriptions, time-based licensing, which typically includes Maintenance. Subscriptions can be 6 months, 1 year, or multiple years. Short-term Subscriptions are more costly than long-term Subscriptions. For the Vendor, Subscriptions insure a more steady, predictable cash flow. For the Customer, it provides the option for canceling a License, changing the quantity or Tool mix, based on usage (or non-usage). This provides the Customer flexibility. It is a win-win. However, the Subscription license will cost more than the Perpetual license after about 2 ½ years. Also, the Customer assumes a degree of risk with a time-based license. If you miss an renewal, expiration date, the application will

stop, even if right in the middle of a project. Carefully monitoring expiration dates, utilization, denials, and managing Subscription Licenses is very important. Frequent PO decisions must be made, and Licenses renewed on a timely basis. Understanding Vendor pricing schemes and negotiating behavior is crucial.

The Purchase Order

As stated previously, it is typical for a high-technology Company to spend 1-1½ % of Revenues per year on engineering software. That money is spent through Purchase Orders (PO) issued to various Vendors. The PO is the source document that confirms what Licenses you paid for and therefore, what Licenses can be used. The exception is the “Temp” License which Vendors issue at no charge, and sometimes without a PO. The Temp Licenses is usually provided as a courtesy, on a short-term basis. When a PO is received for shared Licenses, the Vendor issues a License key with codes to unlock the features and quantities for the “products” reflected in the PO. The asset is a Product, not a feature.

Each PO is negotiated. For the Customer, minimum cost, maximum value is desired. For the Vendor, maximum Revenue, minimum deliverable is desired. Each Vendor has a unique negotiating style and willingness to discount and/or “throw-in” to the deal. The discount and “deal” will vary from Vendor to Vendor, and from PO to PO. Having a history of how each Vendor behaves would be desirable. Moreover, PO cost is charged to internal Cost Centers. Cost Centers reflect Business units or Project teams, and those assets must be properly allocated, carefully managed and accounted for, by Cost Center. So, the PO is a very critical part of License management, but again, how many Managers really know what is in the PO, who paid, or what kind of deal they got. Tracking PO information is an important front-end part of a Total License Management and Compliance System:



Utilization metrics

A lot of emphasis is put on utilization. Unfortunately, common usage metrics systems require tracking every “feature” on every license key. That is way too much information, and does not necessarily map back to Products purchased or up for renewal. A single product (Tool) could have 10-15 “features”. Usually tracking 1 or 2 features per product will help decide if you need more or less of that product. Make life simpler!

Cost minimization strategies

Optimal Tool mix, quantity and restriction, depend on several factors:

- 1) Application cost
- 2) Project priorities and timing
- 3) Heavy user locations
- 4) Usage patterns: frequency, time of day, and duration of check out
- 5) Workload trends

Here is a typical schema for purchasing Licenses:

	WAN	LAN	Node-locked	User-locked
Low-cost applications				
Heavy usage, multiple platforms				P
Heavy usage, single platform			P	
Time-sensitive, critical path access			P	
High-cost applications				
Power Users < 3			S	
Heavy usage, local site		P		
Moderate usage local site		S		
Moderate usage multiple sites	S			
Light usage local site		S		
Light usage multiple sites	S			
Backup for peak loads	S			

(S=Subscription, P=Perpetual)

This schema suggests you have node-locked for affordable, heavy use applications, LAN for expensive applications to be shared at a local site, and WAN for sharing across multiple sites. Quantities could be based on a hypothetical formula:

LAN quantity = # Engineers on LAN x (average hours used per week / 40 hour week) x 50%

WAN quantity = # Engineers on WAN x (average hours used per week / 40 hour week) x 25%

The best scenario could be to have enough node-locked and LAN licenses to meet 80% of demand 80% of the time. Then back that up with a 1-2 WAN licenses for peak situations. Some “denials” of expensive applications is fine.

Acquisitions, Mergers, and Divestments

In today’s world economy it is common for Companies to acquire smaller companies, or merge with similar companies, or divest business units, to gain market leverage.

Understanding the License inventory, value of engineering license assets, associated liabilities, and “needs”, is required to properly assess unit value. Moreover, acquiring and transferring License assets, along with Contracts, Servers, and contact information is important for the combined or remaining company to congeal and move forward. Understanding the combined inventory of tools and Licenses is critical to both sides, and particularly of interest to the auditors. These assets have significant value and contract implications.

Engineering Management responsibility

Ultimately the cost of engineering Tools, and Tool usage compliance, is the responsibility of the Engineering Department Head, typically the VP Engineering. This paper was written to inform Engineering management of the business issues around the use of engineering software Licenses, and to understand a) there is a current problem, b) there is risk, and c) there is a solution, namely License Asset Manager.

License Asset Manager

LAM is a targeted “enterprise-level” solution for engineering license asset management. It was developed by and for those people who manage engineering software licenses. Developed in conjunction with 3 large manufacturing companies (one electronics, one a defense contractor, and one a mechanical product company), LAM has all the right features to consolidate, share and protect all important license asset information across the enterprise. It is a web-based architecture, using popular and reliable web-server components. It allows capture and sharing of information about Vendors, Contacts, Licenses, License Keys, License Servers, License Agreement, etc., and store it in a protected place. It allows your managers to generate inventory reports, see the PO, see the License Agreements, and prepare expense budgets with click of a button. Manage with confidence and clarity.

The value proposition for this new approach is based on:

- 1) Reduced License asset costs by a) knowing what license assets you have and where those assets are located, b) getting an earlier start on renewal negotiations, and c) knowing how to shift licenses around the organization to balance demand, instead of just buying more.
- 2) Uninterrupted Application service by knowing when Application License keys will terminate, and doing something to prevent it from shutting down unexpectedly.
- 3) Better expense planning by having a history of license expenses, and insight into renewal dates and probable costs.
- 4) License Agreement compliance by allowing those who manage the licenses to have access to Vendor terms & conditions. This may be particularly important to those companies concerned about the Sarbanes-Oxley law.
- 5) Reduced License Administration time because everyone won't be trying to maintain their own files and spreadsheets. Information is shared. Saving on time here could be significant.
- 6) Protection of License Asset and Contact information because it will be secured in the LAM database.

The ROI is measured in weeks- not months, not years. It behooves Engineering Management to investigate alternatives for enterprise-level License asset management. Please call for more information or a demonstration.

Biography

Guy Haas has a BS from Univ. of Maryland, and MBA from Case Western Reserve. He has been in high-technology, engineering software since 1975. He founded TeamEDA in 2003, where he is currently President. He also teaches Business Management at a local college, and is a USMC veteran.

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