MONITOR SOLD SEPARATELY

Navigating today's acquisition of plant maintenance decision support software offerings requires a three dimensional map. An analysis of the low priced software, the newest no-priced software, and overall CMMS value analysis as a whole; what applications & Internet-Based Resources for maintenance should contain.

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Fifty percent of the titles I've addressed since embarking on writing this article series are a result of my having received 5 or more concerned phone calls relating to a given subject. This installment: The latest or updated generation of Computerized Maintenance Management Systems selling techniques to be encountered at the National Manufacturing Week Conference in Chicago: 1) Are you going to be victimized by some CMMS offer, what should you do? or; 2) Should you trust the offers at all, or will you fall victim to them?

Analyzing Offers You Cannot Refuse: This year's serious CMMS sales considerations fall into three value structure classes:

1. Size Dependant/Modular Dependant offers;
2. Web Based or Enabled CMMS offers;
3. Captioned Lease offers.

10-15 years ago, the bigger ticket CMMS providers stopped kidding themselves, and decided to take the low-cost CMMS players in the market seriously. Result: An entire generation of software was introduced, that allowed bigger ticket CMMS providers to competitively "Size" their more expensive CMMS offering to challenge a lower priced offering being sold into a specific client situation/-characteristic by a competitor.

We call them "Series 50 Products." "Series 50" is an old IBM strategy, one for selling the punched card tab equipment that preceded computers. To meet competition, we sold "Entry-Level" punched card equipment that operated at ½ of normal speed. Our secret: The card feed drive sheave for this equipment was purposefully reduced to 50% of normal diameter. You could then charge a lower rental to get the "Slower" machine in the customer's door, at prices that compromised your competition.

Later through a "Field Upgrade," (a 15 minute replacement using a larger diameter sheave) the very same equipment would now run at 100-150% of the "Series 50 Speed." Result: You justified a proportionate increase in the equipment's rental, months/1+ years after you had "Price-pushed" it through the door. Sounds like CMMS pricing.

Size Dependant/Modular Dependant
Size Dependant offerings feature a "Series 50, Lost Leader Product," a low-cost entry ($185-$495) CMMS lead-in price that is very attractive for as long as you have a small asset population, less than 50-100 maintainable assets.

The Series 50 good news: Many small asset population offerings are of good value, since they are the hobbled offspring of higher worth, higher feature populated medium to large platform CMMS's (software offered at give away prices in order to get it in the door of a new customer), and have the latter's features. The bad news: The upgrade package for those wanting to install that 101st asset number (piece of equipment) could cost 6-10 times what the small asset population version of the exact same CMMS runs when you arrive at the need for that 101st asset number.

Reality check: The fact that you paid an unrealistically low price for the small asset population version of that CMMS in the first place, carries an unwritten waiver that you cannot weep and thrash over the upgrade fee premium. Needing that 101st asset number often signifies that the almost free ride that you enjoyed is over, unless you want to purchase another Lost Leader, Low Entry Cost, Small Asset Population CMMS license to run side-by-side with your existing one, separating your asset base into one or more, equipment categories i.e., operating departments, buildings, sites. etc. Doubling, tripling & quadrupling side-by-side Lost Leader, Small Asset Population CMMS licenses has its hidden costs, if you're trying to use your CMMS to manage maintenance as a unit business. **Hint:** Do some hard negotiating now, to lock in the price of the upgrade package. Make that the pivotal decision issue. The salesperson will come back to you with better numbers, rather than risk having to sell a CMMS to you twice!

Unless you are using the Small Asset Population CMMS as just a work-order printing press, please exercise caution. Certain maintenance management systems operate via individual goal-setting/goal-attainment comparison; how equipment, people, programs, etc., performance results compare to the individual objectives set for them. Managing individual goals can be accomplished on Small Asset Population CMMS's. Global or selective benchmark results are usually gleaned from CMMS's managing overall [large] equipment populations. They are not designed to automatically combine multiple databases from multiple Small Asset Population CMMS's. Doing so defeats the Lost Leader, Small Asset Population CMMS providers' upgrade package (% revenue) sales plans that CMMS companies have for you. However many Small Asset Population CMMS clients manage to circumvent this by getting their IT department to design an Ad-Hoc utility for importing and combining data sets (databases) from multiple Low Entry Cost Small Asset Population CMMS's into

overall [large] equipment populations that satisfy large equipment population specifications. It'll work well, what's more; it's legal!

Modular Dependant CMMS purchases offer sizable flexibility, since its design & sales theory is based on preplanned use of only what you need. It addresses the CMMS user's needs for a "Characteristic Fit" more sensitively. You have the advantage of two approaches:
1) Compiling A Survey-Selective Application, and; 2) Size-in-Power. Survey-Selective Application compiling, is as described. It is the process of determining your plant maintenance management needs via a comprehensive survey, and contracting for only those CMMS application features needed to support your operation's management characteristics.

The Modular Dependant purchase buyer's characteristics vary. One may have 200 technicians working out of vehicles carrying 150 stock keeping units (parts), most of them expendables. The total organizational stock keeping unit management need is for inventorying 150 SKU's. The management characteristic is for planning & scheduling; little is needed for inventory control. He/she may have 140 technicians each working in three large plants, having 1500 pieces of equipment each, and carrying 125,000 stock keeping units/site, most of them direct-equipment support MRO (Maintenance Repair and Operating) parts. The management characteristic is for sophisticated master production scheduling, plant maintenance planning & scheduling; material requirements planning & inventory control and asset management (including finite cost control).

The Modular Dependant purchase buyer may have 8 technicians each, working out of 10 physical areas, supported by a store room carrying 5,000 stock keeping units. The management needs characteristic is for light Master Scheduling, heavy daily plant maintenance planning & scheduling, and a medium level sophisticated Material Requirements Planning, inventory control, and asset management system. Modular Dependant, means buyer characteristic dependant. Size-in-Power deals with offering Modular Dependant clients differing sophistication levels within each application offering, once the application needs list is compiled through survey. Unlike Size Dependant; the CMMS price for Modular Dependant/Size-in-Power graduates according to the power level of application sophistication being offered for each application module. Modular Dependant/Size-in-Power raises a powerful subject; *Configuration & Financial Auditing of the CMMS now servicing your organization.* Upwards of 75% of CMMS application features needed to support your operation's management characteristics, are not present on your current CMMS, and greater than 60% of the CMMS application features needed to support your operation's management characteristics, will not be included in your next purchase.

Configuration & Financial Auditing
CMMS Configuration & Financial Auditing asks some telling questions about your next generation of needs. It ranges from organizational (staffing) preparedness, through Calendar Based maintenance master scheduling, daily planning & scheduling, materials planning, supply chain management, inventory control and asset management. Configuration & Financial Auditing covers Condition Based application interfaces for Reliability Centered Maintenance, and the abridgement between Calendar Based/Condition Based plant maintenance and owner/user Enterprise systems rarely if ever found in the CMMS marketplace.

Important Note: Too often, angered upgrade fee premium "Victims," incur needless extra expense to themselves by a vengeful switching to another CMMS product, after having learned what the next largest Size Dependant; Modular Dependant/Size-in-Power version of their current CMMS is going to cost them. More good news: Competitive pricing has kept reluctant CMMS vendors "Honest!" Size Dependant; Modular Dependant/Size-in-Power upgrades should be negotiated during the first-stage purchase. Even later on, it can be negotiated for a fraction of your CMMS provider's stated "Sticker Upgrade Price." Most CMMS providers will extend themselves further to keep an annual software maintenance paying existing client, than they will to obtain a new one. Don't be satisfied with your sales' representatives upgrade quote, seek satisfaction further up his or her organization chart.

Configuration & Financial Auditing is cheaper than the cost of CMMS product switching brought about by anger. Most "Vendettas" are expensive, so plan to be calm, and by auditing your needs and doing some research about both your operations maintenance characteristics, and any intended CMMS's fit with those maintenance characteristics you'll achieve your goals. Recommendation: Evaluate and buy into the CMMS product that you are going to need to satisfy your 5-10 year plan, even if your initial purchase is the low-cost small asset population version of the same CMMS. Under-engineering your long-term CMMS purchase is both embarrassing and expensive.

Web Based or Enabled CMMS Offers
In a phrase: Five years old and highly disappointing. I'm definitely spoiled, having entered this profession during the era when remote computing (time shared) offerings for Computerized Maintenance Management Systems included powerful features, intelligently integrated data, producing seriously-needed up-to-date decision-support. The promises made by Web Based or Enabled CMMS providers of impending application-based sophistication, provided at a low cost never happened. Countless smart-alecky salesperson-provided press conferences and "CMMS Infomercials" disguised as magazine articles, has left remote CMMS users wanting. Most of the Web offerings are nothing more than palm-sized legal pad displays of maintenance work orders, purchase orders, and equipment histories, emulated on Personal Digital Assistants. What they are supposed to be is a full-blown, working Web Based or Enabled copy of a sophisticated CMMS for metered-use access. Those not having the authority to contract for $10,000-1,000,000+ of capital expenditure for a CMMS purchase, can "Rent

it," based on metered-use of host resources, or a flat monthly fee.

During a previous editorial, I spoke of being part of IBM's Computer Time-Sharing and Service Bureau generation, supporting seriously involved corporations, having significant remote computing CMMS and Construction Management Decision-Support products. Their reason for entering the remote services business was meaningful; to offer decision-makers not having the authority to purchase 6-7 figure software, metered-use access to same. You didn't buy it, you just rented it, and received another metered bill. Their products were impressive. More to the point, the maintenance work order they displayed told you 1) that the MWO was workable, that the skills [people] inventory, bill of materials & tools for the job were available, and; 2) whether the job was: a. early; b. on-time, or; c. running late. The great majority of today's Internet-based Resource (IBR) CMMS's are poor planners & schedulers, have mediocre supportive (MRO) inventory modules, connected to poorly constructed Business to Business E-Commerce modules, and prevented from connecting to leaders in the Dot-com business by unfair, deceptive and restrictive agreements among some of its leaders.

Asset management is a history file to many of these offerings, with finite cost control being mostly vapor. Too many of today's IBR CMMS's are just a competitive Band-Aid® for heading off having another CMMS provider run off with one of their clients. Results: Too of the IBR CMMS's that you will see displayed are just that; display models; prototypes waiting for the arrival of serious content. If it doesn't plan, schedule, power track events, control costs, inventory, stratify & integrate skills; if it doesn't push exception, emergency & contingency information to your desktop, palmtop, or cellular, as it occurs, then it just "Isn't!"

Captioned Leases

Two months ago, I received my 5th telephone call from a CMMS marketer-client, asking me what I thought about the following: Offering a CMMS "For Free" (no money down), if the purchaser would contract for a Software License Maintenance Fee of 30% of the software's value/year for the term of the agreement. Trying to influence my reasoning, the caller labeled the offer as an "Unconscionable Scam." I disagreed, and came to the following conclusion. It's a heavily weighted, no-yield lease. "After running some numbers" that I'll share with you: There are excellent terms available to you upon demand. Be very careful of what length, service, yield multiple and type of contract you write!

Building an analysis: We ran a mode average, to allow us to pin-point the most frequently occurring examples of single & multi-site contract pricing that would apply to this offering, and came up with $12,000; $30,000; and $170,000 as frequently occurring Principal Cost/Value price examples. We then performed a separate spreadsheet analysis of each price example by year and determined the cumulative cost (column by column) of a CMMS for 1) No Money Down at 30%/year (of Principal Cost); 2) Full Payment Down, + Annual Maintenance Cost at a Straight 12%/year (of Principal Cost); 3) No Money Down at 30%/year of Principal Cost - Annual Maintenance Cost at a Straight 30%/year (of the declining balance of the Principal Value[We included a column for the Declining Principal {Depreciated}Value] at 30%); and for No Money Down at 12%/year of Principal Cost - Annual Maintenance Cost at a Straight 12%/year year (of the declining balance of the Principal Value[Again, we included a column for the Declining Principal {Depreciated}Value]at 12%).

What the Bean Counters Might Think

The common premise for each example, is that for 10 years, your CMMS provider will maintain your CMMS at most current version, with no prejudice. Using $ 30,000 (Figure 1) as the median Principal Cost/Value of a CMMS contract, our analysis of a no money down contract for a Software License at a License Maintenance Fee of Cost at 30% of the software's value/year (only) for the term of the agreement produces way less-than-optimum results. You pay $90,000 in rental for ten years (at what percent tax deductable?), for a non-negotiated $ 30,000 list price, and the rentor gets the hard depreciation write-off. The industry accepted application of Cost (Principal Cost/Value) at sale, + 12% of the software's cost/value/year for maintenance/upgrades results in a

Year	Principal Cost/Value	Cost @ 30%	Cost @ Prin+ 12%	Declining Prin Cost @ 30%	Declining Prin Value @ 30%	Declining Prin Cost @ 12%	Declining Prin Value @ 12%
1	$30,000	$9,000.00	$33,600.00	$9,000.00	$21,000.00	$3,600.00	$26,400.00
2		$18,000.00	$37,200.00	$15,300.00	$14,700.00	$6,768.00	$23,232.00
3		$27,000.00	$40,800.00	$19,710.00	$10,290.00	$9,555.84	$20,444.16
4		$36,000.00	$44,400.00	$22,797.00	$7,203.00	$12,009.14	$17,990.86
5		$45,000.00	$48,000.00	$24,957.90	$5,042.10	$14,168.04	$15,831.96
6		$54,000.00	$51,600.00	$26,470.53	$3,529.47	$16,067.88	$13,932.12
7		$63,000.00	$55,200.00	$27,529.37	$2,470.63	$17,739.73	$12,260.27
8		$72,000.00	$58,800.00	$28,270.56	$1,729.44	$19,210.96	$10,789.04
9		$81,000.00	$62,400.00	$28,789.39	$1,210.61	$20,505.65	$9,494.35
10		$90,000.00	$66,000.00	$29,152.57	$847.43	$21,644.97	$8,355.03

FIGURE 1

Year	Principal Cost/Value	Cost @ 30%	Cost @ Prin+ 12%	Declining Prin Cost @ 30%	Declining Prin Value @ 30%	Declining Prin Cost @ 12%	Declining Prin Value @ 12%
1	$12,000	$3,600.00	$13,440.00	$3,600.00	$8,400.00	$1,440.00	$10,560.00
2		$7,200.00	$14,880.00	$6,120.00	$5,880.00	$2,707.20	$9,292.80
3		$10,800.00	$16,320.00	$7,884.00	$4,116.00	$3,822.34	$8,177.66
4		$14,400.00	$17,760.00	$9,118.80	$2,881.20	$4,803.66	$7,196.34
5		$18,000.00	$19,200.00	$9,983.16	$2,016.84	$5,667.22	$6,332.78
6		$21,600.00	$20,640.00	$10,588.21	$1,411.79	$6,427.15	$5,572.85
7		$25,200.00	$22,080.00	$11,011.75	$988.25	$7,095.89	$4,904.11
8		$28,800.00	$23,520.00	$11,308.22	$691.78	$7,684.39	$4,315.61
9		$32,400.00	$24,960.00	$11,515.76	$484.24	$8,202.26	$3,797.74
10		$36,000.00	$26,400.00	$11,661.03	$338.97	$8,657.99	$3,342.01

FIGURE 2

cost of $ 66,000 for a $ 30,000 list product, and again, the rentor gets the hard depreciation write-off. It's time to do the unmentionable: Get some Bean Counter guidance.

Rocket Science

The new pricing logic: If you are renting a product from me, from which I (the rentor), am taking depreciation; I may owe you the lion's share of the depreciation. Formula: Principal Cost/Value, minus the fair annual depreciation taken. At 30% (Figure 1) the aggregate Declining Principal Cost of Rental after ten years should run to $ 29,152.57 of the original $ 30,000; in Figure 2, $11,661.03 of the Principal Cost/Value of $ 12,000 is shown, or; in Figure 3, $165,197.92 of the Principal Cost/Value $170,000.

At 12%, the total Declining Principal Cost of Rental after ten years should run at $21,644.97 of the original $ 30,000 (Figure 1); $8,657.99 of the Principal Cost/Value of $ 12,000 (Figure 2), or; $122,654.83 of the Principal Cost/Value $170,000, shown in Figure 3. CMMS purveyors will call Declining Principal Cost of Rental baseless theory; that they can't afford to engage in this form of leasing plan. The opposite is true. Thirty-four years ago, a project planning software purveyor was having difficulty selling a $ 130,000 IBM mainframe version of their product, owing to the difficult number of steps required to make such a large sale, and the length of time (selling cycle) required.

Year	Principal Cost/Value	Cost @ 30%	Cost @ Prin+ 12%	Declining Prin Cost @ 30%	Declining Prin Value @ 30%	Declining Prin Cost @ 12%	Declining Prin Value @ 12%
1	$170,000	$51,000.00	$190,400.00	$51,000.00	$119,000.00	$20,400.00	$149,600.00
2		$102,000.00	$210,800.00	$86,700.00	$83,300.00	$38,352.00	$131,648.00
3		$153,000.00	$231,200.00	$111,690.00	$58,310.00	$54,149.76	$115,850.24
4		$204,000.00	$251,600.00	$129,183.00	$40,817.00	$68,051.79	$101,948.21
5		$255,000.00	$272,000.00	$141,428.10	$28,571.90	$80,285.57	$89,714.43
6		$306,000.00	$292,400.00	$149,999.67	$20,000.33	$91,051.31	$78,948.69
7		$357,000.00	$312,800.00	$155,999.77	$14,000.23	$100,525.15	$69,474.85
8		$408,000.00	$333,200.00	$160,199.84	$9,800.16	$108,862.13	$61,137.87
9		$459,000.00	$353,600.00	$163,139.89	$6,860.11	$116,198.68	$53,801.32
10		$510,000.00	$374,000.00	$165,197.92	$4,802.08	$122,654.83	$47,345.17

FIGURE 3

I gave their Marketing V.P. a capital idea: Put the product on computer time sharing, where the price of usage (rental) of the product would run from .4 of 1% to 2.3% of the selling price/month. It worked to the point where everyone forgot the original mission, circumventing a $ 130,000 capital outlay for the software. Forgot, is an understatement: After 14 years, so many engineers at a given company were renting (computer time sharing) the project planning software product, that the average expense outlay for the rental by an average regular user was $ 450,000, the high side $ 2.7 million. It didn't cut off, nor did a "Declining Principal Cost of Rental" algorithm kick in for the computer time sharing user, when their rental expenditures reached $ 130,000. It was a "Rental," you know!

As to paying $90,000 for a $30,000 CMMS; if the CMMS application strength was sound enough to produce Return on Structured Risk numbers (better operational capability and reduction of maintenance opportunity expense), I would be the first to defend the Time Value of Asset [Money] rationale behind signing a no money down contract for a Software License, and paying $90,000 in license fees over ten years. But few, if any, qualify under the RSR test. There is a fall-back position however: RSR could be more easily achieved via the total Declining Principal Cost of Rental convention elaborated here. From the CMMS purveyor's perspective, its

a terrible suggestion, but then again the paying of $90,000 in rental for ten years, for a non-negotiated $ 30,000 list price, at no money down for a Software License at 30% of the software's value/ year, is like a California energy supplier's (Enron's) speculative pricing theory. The last thing thing that an investigative auditor (like Arthur Anderson) would expect to discover being figured into its selling price, is actual Cost of Goods Sold.

Through the Nineteen-Seventies to Eighties, most Plant Maintenance Managers/Plant Engineers didn't have the authority to purchase 6-7 figure CMMS software. Today, most don't have the authority to purchase 5-7 figure CMMS's. They need the size and sophistication; their options are; A) Metered-use access to Internet-based Resource CMMS's, or the Value Rentals shown above.

Should You Negotiate

I heard a television commercial for an SUV lease that was outrageous enough for me to inquire into, even if I wasn't interested in leasing one. It included vehicle maintenance, insurance and 6 months of free gasoline. Analysis proved that if you firmly negotiated the vehicle price, interest rate, insurance rate, and maintenance fee, you could probably lease three SUV vehicles for the same price that you could lease two, without negotiation or logical argument. Of course SUV leasing managers, or CMMS salesmen will both argue: "What are you worried about negotiating a lower price for; the thing is fully tax-deductible, isn't it? What do you care? You have the authority to rent it without the bean counters, or IT people don't you?" Right; And the Census Bureau doesn't think its important to keep statistics on how many Suckers are born each day!!