

# PACS Purchase Poker – Playing to Win

## *Tips on understanding the hidden rules behind the high stakes game*

By Ed Heere

Today, hospitals and imaging centers of all sizes are enjoying the benefits of the ultra-efficient digital workplace. However, for some, the high cost of PACS has been a significant barrier to entry into today's digital world. Others, small hospitals and diagnostic centers in particular, have broken the bank to become players in the high-stakes world of PACS.

As IT plays an increasingly important role in medical imaging, facilities of all sizes would be well served to understand the rules driving prices and the hands they are being dealt in the risky PACS purchase game. While some factors are obvious – such as the depth of user training and IT support – others may come as quite a surprise.



In general, three major factors determine the price of a PACS – the vendor's costs of producing and maintaining the technology itself, prices of related products in the current market and, finally, competitive pressures among vendors.

### Technology Development

Technology costs are complex. Once a product comes to market, naturally, a vendor will amortize software and hardware development costs through sales of the final PACS product. How much money is involved in developing sound PACS technology? And how does that determine your price? It depends on who you ask and how they play the game.

An important, but often overlooked, factor driving the cost of technology development is exactly when the manufacturer entered the market. While experience is usually a good thing, longtime PACS players typically have systems incorporating older technologies that do not deliver today's cutting-edge performance and, at the same time, carry a higher price tag. Moore's Law holds that the cost of technology drops significantly every 18 months – meaning that the consumer receives increasingly higher performance for a lower price in a very short time frame.

And, while older manufacturers certainly upgrade their products, offerings are typically based on older technology backbones that hinder performance and price in the current market.

Also, be aware that often PACS companies do not design their own software from top to bottom, but instead license technology and modules from other vendors. High licensing fees, development of cross-vendor interfaces and training of a vendor's in-house technical support staff often elevate the cost of producing, and, therefore, the purchase price, of those PACS. It also puts them at the mercy of upgrades and changes initiated by the supplying vendor, creating a support nightmare.

For example, companies based on Microsoft browser technology are potentially in jeopardy with every Microsoft security patch sent to the user community, often several a month.

Conversely, utilization of off-the-shelf PCs and other computer hardware, as well as operating systems, reduce a vendor's technology expenses. Some elect to pass this savings on to purchasers, while others choose to add a corporate logo onto off-the-shelf hardware and position it as part of their proprietary systems. Use of commodity hardware typically does not affect performance – in fact, often it supports a more open system. Vendors that incorporate such hardware and are upfront about it typically deliver higher value.

## Support and Upgrades

Once the product is in the marketplace, support is one of the most important factors in determining price. And it includes both technical support to keep products up and running and development and upgrades of software and hardware.

Support comes in many forms. Naturally, training, help desks and assistance in the event of technological difficulties are major benefits. While they certainly add to the price, it is money very well spent.

One aspect of support that most people fail to consider is the cost of support that longtime PACS vendors have to bear for older legacy systems that need to be constantly upgraded to perform acceptably, according to today's rapidly evolving IT standards.

It is incumbent upon manufacturers to create a constant stream of patches, interfaces for new technology and significant upgrades to keep the wheels of radiology turning at longtime customer sites. Different software releases demand individual upgrades, meaning that the vendor's costly software developers are constantly on the clock. The costs of all this is funded, in part, by new software sales, resulting in higher purchase prices.

In general, while purchasing from a well-known, longtime vendor may to some extent help you sleep better at night, it also takes its toll on your wallet. By contrast, vendors – often lesser known names – that arrived late on the scene are not burdened with all this legacy support and often pass the savings in operating costs on to their purchasers to get a competitive edge.

The same is true for support of any hardware included in the PACS solution. The cost-to-performance ratio of hardware improves dramatically over short time periods. Younger, technologically forward vendors often base their systems on newer hardware – and purchasers reap the benefit.

A recent trend among PACS vendors is offering outsourced storage on the company's offsite servers delivered through a pay-as-you-go application service provider (ASP) pricing model. This has the advantage of sharing costs – especially maintenance and upgrades – among multiple facilities, yielding an economy of scale.

For example, CoActiv includes a secure offsite storage package with all its systems, eliminating the need to purchase hardware up front and upgrade and maintain it.

Newer storage configurations, such as large ultra-fast RAID's make this ASP storage much more technologically feasible than before. However, many PACS vendors have not jumped on this technology bandwagon and that can raise costs for purchasers, who are unaware of their full range of options and select costly onsite archives often based on obsolete tape or DVD jukebox system, fraught with mechanical failures and subject to media changes in the supply chain.

## Market Pressures

Once technology reaches the market, pricing is a complex issue that must take into account all players, their market segments and competitive pressures. Generally, the more players in the market, the better for the end-user. Some players bring down their price levels by leveraging existing technologies or removing unneeded features.

A few years ago when PACS was dominated by large equipment vendors, the technologies that make up a PACS were more costly and prices were high across the board. While today these costs may have diminished, the price of many PACS solutions has not – often, the difference just goes to vendor profits.

Yet, for many, the perception remains that quality PACS technology must carry a hefty price, and this becomes a self-fulfilling policy.

Today, a few PACS companies offer truly affordable systems, often with extras included such as DICOM Worklists, CD burners, exam distribution systems for referring physicians, redundant off-site archiving and more.

As prices have come down, technologies incorporated in PACS have become increasingly accessible to more and more vendors, including smaller companies. Therefore, more have jumped into the fray, offering

choices at various price levels. But often pricing does not reflect the underlying cost or quality of the technology. It is driven significantly by perception and the law of supply and demand.

Further, as DICOM and other IHE industry standards have become accepted, some vendors are supporting these open systems, allowing PACS users more options to select their own best-of-breed solutions. These solutions are often more affordable and can be tailored specifically to an installation's needs.

Lower-priced product, more extras and advancing technologies are good news for today's PACS consumers. This means that even traditionally high-priced vendors will have to support today's fair market values to remain competitive.

What does all this mean for PACS purchasers going forward? More performance and better value. And that's as it should be. After all, PACS is no more than a software package for manipulating, communicating and storing image.

Today, there is no need for it to carry a high price tag and for purchasers to gamble on the unknown.

— *Edward Heere is president and CEO of CoActiv Medical Business Solutions ([www.coactiv.com](http://www.coactiv.com)), Ridgefield, Conn. Questions and comments can be directed to [editorial@rt-image.com](mailto:editorial@rt-image.com).*