

VOIP/IP TELEPHONY: BUY OR LEASE

GARY AUDIN

Delphi, Inc.

May 2009

CIO/CFO Financial Decisions

Communications technology is following the path of IT. Call servers/managers, phone and trunk gateways and IP phones are not expected to remain in use much beyond five years. Communications technology life has been shortened considerably. The question for the CIO and CFO becomes, "Should we buy or lease the rapidly changing VoIP/IP Telephony (IPT) communications technologies?"

Technologists often respond: "We have the cash, so why lease? It will cost us money to lease that we can save by buying the IT technologies." This can make sense from a technical point of view. But this is not necessarily the view of the CFO.

The CFO has to ensure that there is cash is when needed and is not tied up in a technology purchase that cannot be changed. The CIO/communications manager likewise needs to maintain the flexibility to react to changes in technology and the demands of his or her user group. The CIO may be able to acquire more Unified Communications technology if the first year budget is not too great. Leasing can reduce the first year cost thereby increasing the UC functions implemented at an earlier date.

Avoiding interest and financing charges can be very attractive. Putting money in a bank pays interest to the enterprise, whereas leasing costs the enterprise interest. Cash, however, is not really free money to spend. It is a limited enterprise asset that can be applied to many areas of the enterprise, and thus there is an opportunity cost associated with it. The CFO may have better, more profitable uses for the cash on hand than buying communications technology.

Arranging financing can take time when an enterprise wants to take advantage of a business opportunity or business climate change that requires fast action. No cash on hand, then no opportunity and no flexibility to respond to the changes.

In addition, there can be tax advantages to leasing that are not available when the communications technology is purchased. Leasing is also beneficial because of the residual value of the technology—i.e., what the lessor (the provider) can expect to recover from the sale of the technology at the end of the lease period. The residual value will contribute to a reduced lease cost. Further, the residual value of the communications products will reduce the Total Cost of Ownership (TCO) for the enterprise.

The communications technologist may think that "keeping the technology for four years makes purchase more sensible." Communications technology continues to improve,

making earlier systems and devices obsolete sooner. Emerging communications technologies are constantly being offered.

Furthermore, a major shift is occurring in communications towards greener operations. Owning older equipment that consumes more electrical power will result in higher operating costs than the new, more energy-efficient products. Leasing allows the technologist to replace the power hungry equipment with less costly-to-power systems. Replacing the equipment can reduce the power consumption by as much as 25% according to the "EPA Report to Congress on Server and Data Center Energy Efficiency" released in August, 2007. The energy savings will more than pay the interest charges on the lease.

Technology Continues to Change

The constantly changing communications technology offerings create a difficult situation for the communications organization. Keeping up-to-date is a never ending process. Products go through an ever shortening life cycle:

- A product is announced.
- The product is shipped to the first customer.
- A newer, more capable product is announced.
- There is an end of sale date (sales terminated) for the earlier product.
- There is an end of maintenance date for the earlier product.
- There is finally an end of support date for the earlier product.
- The total elapsed time can be 36 to 60 months.

In IT, the pricing half life for storage systems is about 15 months, and servers about 36 months. It is common that the PC on the desktop, network routers and switches are eclipsed with new products every 1 to 2 years. The same is happening to communications technologies. This encourages the enterprise to consider replacing the technology even faster. This fast replacement will be facilitated through leasing rather than purchase.

A technology refresh program is common in many enterprises. Leasing allows a fixed monthly payment while delivering proactive technology replacement.

Disposing of purchased communications technology is a hidden cost that is rarely considered. This hidden cost does not appear until the disposal time for the technology. The hidden cost will increase the communications budget, but with no return from the investment (money and labor) for disposal. In a leasing arrangement, the lessor has to deal with this disposal, at no cost to the enterprise, simplifying the communications procurement. The lessor does not have to pay for disposal or storage costs.

Enterprise Objectives

The enterprise has to assess and deliver on its operational objectives while controlling the risks and responding to business and technology challenges. The CFO will also have objectives that will influence, and may restrict, the communications organization and its operations to minimize and control the financial risks.

The communications technologist has to deal with:

- Recurring obsolescence of both information and communications technologies
- Taking advantage of upgrade options and investment protection offered by many vendors.
- Removing technology that no longer satisfies the enterprise's goals
- Asset/inventory management
- Economies of scale acquisition
- Flexibility in timing acquisitions
- Controlling the vendor of the technology

The CFO is looking for:

- Flexible financing and payment options
- Controllable and predictable cost
- Cash flow control
- Reciprocity of tax benefits (the lessor gets the depreciation that reduces the cost of the lease)
- Lease payment deductibility
- Avoiding tax purchase penalties (sales tax)
- Avoiding stranded assets
- Improved financial ratios
- Financial reporting ease (lessor does most of the work)
- Reducing administration

Is the Buy Decision Right?

The outright purchase of the communications technology may look favorable if the enterprise has cash on hand or unused bank lines of credit and does not anticipate any new business opportunities to surface that would require technology changes before the lifespan of the purchase is complete. This attitude, in today's business climate, is probably not realistic. Buying will not disappear, but leasing will become equally considered rather than ignored.

When businesses grew organically but did not have the political, economic and societal demands we have today, this could be acceptable. It was acceptable because there was stability in the business competition and financial sectors. Financial institutions and their consistent ability to provide credit has changed. This stability is less common today. An enterprise does not know if their market, competition and government

regulations will be the same next year as this year. In fact, the safe assumption is that they will not.

What happens when an enterprise makes an older technology purchase just before the emerging technology becomes available? The communications purchaser is locked into the older technology for many years. Enterprises have been cautious about buying the latest technology until it demonstrates field success. However this can take one or two years. Many network products only have a four year product life. Buying after two years means that the purchased technology will obsolete only two to three after the purchase. This lock-in may eventually damage the profitability of the enterprise, or the enterprise has to scrap the older technology before its capitalized end-of-life. This then will be wasted cash and a charge to the P&L. A three year lease allows flexibility to the communications organization to change technology systems sooner to keep pace or be in advance of their competitors.

Buying communications technology constrains the flexibility of the C level executives to respond to unanticipated and sometimes unprecedented market forces. An alternative to expending the cash on the communications procurement is to finance the acquisition through a lease-purchase arrangement. But this option has few of the advantages of leasing and all the limitations of a buy/purchase arrangement.

VoIP/IPT Leasing

Let's look at four areas of communications technology, the server, phone gateway, trunk gateway and IP phone. Each will have a separate thought process in the buy vs. lease decision.

Server

Many IT organizations lease their servers for the data applications. Server products keep improving with more compute power, lower energy costs and smaller data center footprints. Virtualization of server based applications is quite common.

The VoIP/IPT servers are different story so far. The major IPT vendors use modified servers running modified operating systems. Linux, in these IPT servers, is NOT the same as the off-the-shelf Linux, thereby excluding virtualization for the call manager software. Even though most call manager/servers are relatively idle, generally less than 10% busy, virtualization is uncommon. I therefore suggest the call manager/server be purchased UNLESS the call manager software can be virtualized. If virtualization is used, then leasing the server like that done for other data applications is a better idea.

Phone Gateway

The phone gateway is required to support legacy devices. Besides analog and digital phones, this gateway may also support fax machines, alarm systems, modems, and security devices. A long term goal is to reduce and eventually eliminate the legacy analog and digital phones. Some gateway connections will continue to be required for the non phone devices and connections. I suggest that the enterprise buy the gateway

connections for the non phone devices. The gateways for the legacy phones should be leased so that as IP phones and softphones are introduced, the phone gateways can be retired on the lease.

Trunk Gateway

The trunk gateway connects to the PSTN and to other enterprise sites via T1 and PRI connections. Many enterprises will or are connecting their IPT sites together with IP trunks, negating the need for a trunk gateway for this purpose. If legacy trunking is in use with the goal to move IP trunking, then the inter-site trunk gateways should be leased.

SIP trunking is growing in popularity and availability. Although most SIP trunking installations are unique to each IPT vendor, the major carriers and ISPs support multiple SIP trunk interfaces. SIP trunking also negates the need for trunk gateways. Although SIP trunking may not be available, it will be soon be available at a lower cost than legacy trunks. This is the second reason for leasing the trunk gateway. The primary reason for retaining and therefore buying any trunk gateways are for resiliency, as backup to the SIP trunks.

IP Phones

Traditionally, enterprises kept analog phones in use even when changing PBX vendors. Everyone supported the classic analog phone. Digital phones on the other hand are unique to each vendor. The legacy phones remained rather stable in their operation over the last decade or two. This is NOT true of the IP phone.

If you purchased H.323 or proprietary phones because of the IPT feature set, you chose to make this decision because the SIP phone support was less attractive or not available. But as the IP phones mature and new models are introduced, then the older IP phones become obsolete. This obsolescence can occur every two to three years. It is now common that to the gain the UC advantages using SIP, the IP phone has to be replaced.

If the enterprise is convinced that the initial IP phone purchases will be useful for more than four years, then the phones should be purchased. If however, the enterprise vision is to add more features and functionality in three years, the IP phones will be replaced. If this is the case, the IP phone should be leased.

The True Lease

Leasing is the preferred option if:

- Technology replacement according to industry life cycles is needed
- There is a business need for rapid technological change
- The enterprise is undergoing downsizing or reorganizing
- There is a business need for quick adoption of new technologies
- The flexibility of spreading out payments and using operating funds (rather than capital funds) would be beneficial

A true lease, also referred to as an operating lease, does not involve the lessee (customer) obtaining ownership of the equipment. The lessor retains ownership, and the lessee obtains the use of the technology for a specific amount of time. It is recommended that an operating lease should meet the following requirements:

- The lease term should not be for more than 75% of the useful life of the equipment.
- If the enterprise leasing the technology wishes to purchase it at the end of the lease, the organization must pay fair market price for the hardware and software.
- The lease cannot automatically transfer ownership of the property to the lessee by or at the end of the lease term.

If these requirements are not met, the lease is considered a capital lease and the assets must be capitalized.

Full Payout, Capital Lease, Lease-Purchase

A lease-purchase, full payout lease or capital leasing agreement spreads out the terms of payment for equipment. It is a time payment plan. At the end of the payment period, the enterprise obtains title to the hardware and software. The enterprise will be able to use the hardware and software and to spread payments over time to ease the financial burden of making large IT acquisitions.

Lease-purchasing may be the preferred option if:

- The dollar value of the equipment is substantial and its useful life to the enterprise is longer than three years.
- The flexibility of spreading out payments would be beneficial.
- The enterprise does not have staff and systems to track assets and manage the lease.

Vendor Captive Leasing

In a lease from a captive leasing company, the lessor offering terms is also the manufacturer of the equipment. Most communications equipment manufacturers have a captive finance and leasing company. The vendor sometimes offers some payment relief to ensure a closed sale. In these cases, there are usually strict limitations on the ability to use and add non-manufacturer parts or upgrades.

A captive lease has a possibility of locking the enterprise into a single vendor. The vendor of the LAN switches may force the customer to buy the vendor's storage, IP telephony, Unified Communication and/or software applications. The customer therefore can not select the best-of-breed products from multiple vendors. This forces the customer to assume the single vendor has a continually robust and expanding product line, an optimistic view. It also assumes that this vendor has best of breed products.

Leasing Advantages

The advantages to leasing are multifold. There are both technology and financial reasons to lease. The primary reasons to lease are:

- A lease can smooth out budget fluctuations and preserve cash.
- A lease provides an alternative source of capital in addition to bank lines of credit.
- A lease will facilitate rapid deployment of new and emerging technologies.
- A lease will facilitate standardization efforts across the enterprise.
- A lease provides an effective disposal strategy for used hardware at the end of the lease.
- Tax advantages where the entire monthly payment can be written of as an expense or capitalized depending on the lease type.

Leasing will allow the financial useful life of the communications assets to be synchronized with the realities of the constantly changing communications environment. This reduces the risk and financial exposure for the enterprise. Leasing for 3-4 years is a good balance of the TCO, technology trends and enterprise demands.

The regulatory and compliance requirements have stimulated the communications organization to implement effective asset management linked to the financial reporting systems, which makes leasing much easier to embrace. The improved asset management and financial tracking integrates well with the enterprises' change management and technology turnover processes.

Leasing improves the technology infrastructure management as an operating cost instead as an asset based investment. When the communications infrastructure is treated as a fixed asset, then the enterprise mindset may limit the flexibility so important in remaining current with communications technologies. Leasing retains the flexibility to respond to the market forces that produce rapid product changes.

A shorter version of this material "Buy vs. Lease for Communications Technology" was posted at www.nojitter.com.

About Gary Audin

Gary Audin has more than 40 years of computer, communications and security experience. He has planned, designed, specified, implemented and operated data, LAN and telephone networks. These have included local area, national and international networks as well as VoIP and IP convergent networks in the U.S., Canada, Europe, Australia and Asia. He has advised domestic and international venture capital and investment bankers in communications, VoIP, and microprocessor technologies.



For more than 30 years, Gary has been an independent communications and security consultant. Beginning his career in the USAF as an R&D officer in military intelligence and data communications, Gary was decorated for his accomplishments in these areas. He has analyzed the US Navy's future for IP transmission via satellite and prepared a VoIP feasibility for a major multinational firm. He has participated in VoIP procurement, RFP preparation and review for converged systems and networks for enterprises and state governments.

Mr. Audin has been published extensively in the Business Communications Review, ACUTA Journal, Computer Weekly, Telecom Reseller, Data Communications Magazine, Infosystems, Computerworld, Computer Business News, Auerbach Publications and other magazines. He has been Keynote speaker at many user conferences and delivered many webcasts on VoIP and IP communications technologies in 2004 through 2008. He is a founder of the ANSI X.9 committee, a senior member of the IEEE, and is on the steering committee for the VoiceCon conference. Most of his articles can be found on www.webtorials.com, www.bcr.com and www.acuta.org. He writes a weekly blog on communications subjects that can be found at www.voiploop.com and www.nojitter.com and publishes technical tips at www.Searchvoip.com.

He holds a BSEE from New Jersey Institute of Technology, with graduate work in Computer Science at Syracuse University. He has been an Adjunct Professor at Pace University and an instructor at Boston University.