



ACCELERATING
ADOPTION TO
HOSTED IP
TELEPHONY:
A New Model for
Hosted IP Service
Providers

Value Beyond VoIP Trunking

Written by
Citel and Frost & Sullivan

Citel.

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MARKET OVERVIEW (NORTH AMERICA)

Introduction

The emerging convergence of voice and data has introduced profound changes in the enterprise telephony landscape. Two dynamic and evolving system designs are making inroads on traditional phone systems by fully satisfying small enterprise, medium enterprise, and branch office communications requirements: the IP-PBX and, alternatively, hosted IPT (IP telephony) systems.

IP PBXs and hosted IPT systems represent the evolution of the traditional TDM PBX and Centrex architectures that were prevalent until the end of the previous decade. Therefore enterprises willing to migrate away from circuit-switched PBX systems will have to consider a migration from their existing solution to either one of the two next-generation alternatives.

Typically, the decision to migrate depends on a set of circumstances that is particular to each business. Therefore, it is an event-driven phenomenon that is typically triggered by the following occurrences:

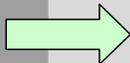
- Completion of the depreciation cycle of older TDM-based PBXs
- Expiration of existing TDM Centrex contracts
- Office moves and/or consolidation
- Greenfield opportunities
- Gradual enhancement / replacement of newer PBX due to other factors (more mobile workforce, higher voice traffic volumes, etc.)
- "Special situations" such as government stimulus programs or special one-time offers made by vendors to help migrate their installed bases toward IP

Another trigger will be the replacement cycle. The Y2K replacement activity disrupted the age distribution of the installed base. Consequently, a large number of TDM PBX systems were replaced before their "due date" (i.e., before being completely written off from an accounting perspective or before becoming obsolete from a CIO point of view). A considerable number of decision makers opted for that choice because it made more sense to buy new rather than pay an expensive upgrade fee to make their systems Y2K compliant. From 2006 onward, the bulk of the PBX systems that were new or updated in anticipation of Y2K are becoming due for an upgrade or replacement, and this has been an additional catalyst for the replacement opportunity.

On a broader scale, a paradigm shift is taking place with the emergence of the packet-based solutions, and the viability of converged voice and data networks. An IP PBX or a hosted IPT solution, do not merely represent new communications systems, but also key enablers of new business, and a cost saver that improves business processes. CIOs and CTOs will realize that VoIP is more than just transporting voice IP packets over a LAN. The key relies on integrating those voice packets with second-generation IP enterprise

applications, which will enhance employee productivity and hence become a competitive advantage. In seeking out a new solution, enterprise decision makers typically need to have the following set of objectives in mind:

Figure I –Enterprise Telephony Solutions Business Needs

Customer Expectations		Business Requirements
<u>Investment protection</u> : approximately 75 percent of the investment in existing voice networks is in endpoints, trunks, applications and end-user training		Leverage investment in legacy equipment Gradual migration path preferred over forklift type upgrade
<u>Cost savings</u> : lower costs for items such as maintenance and long distance		Lower Total Cost of Ownership (TCO) Branch office toll savings
<u>Low failure rate</u> : system has to function continuously with minimal amounts of down time		High overall system reliability
<u>Ease of system management</u> : simple Operations, Administration & Maintenance (OAM)		Simplicity and integrated architecture Straightforward capacity expansion
<u>Productivity software</u> : applications that will increase employee efficiency		Provide unmatched choice and flexibility Standards-based applications

Source: Frost & Sullivan

In opting between the IP PBX and the hosted IPT alternatives, there are several factors that enterprises take into account, including:

- Ownership / control of the solution: medium and large enterprises typically are more inclined toward a premises-based option because they feel that with a hosted IPT solution, they will experience a lack of control. Many of these businesses are very cautious of letting someone else manage their systems, even if it is initially less expensive, due to concerns about response times, SLAs (service level agreements), etc. On the other hand, small and medium-sized businesses usually require fewer features and tend to prefer a fixed and predictable monthly bill.
- Upfront versus running costs: there is a split of opinion here, with SMEs being typically more receptive to the idea of paying higher recurring costs rather than making a big cash outlay for the IP PBX “rip-and-replace” strategy. By contrast, medium and large enterprises typically are willing to make a bigger upfront investment and save on the monthly fees.

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- Technology risk: larger-sized companies are typically more accommodating in facing the life cycle uncertainty of new premises-based IP telephony gear, whereas smaller businesses tend to prefer for service providers to bear that risk.
- Total cost of ownership (TCO): resource saving is a key consideration for SMEs, as they usually prefer to lower the need for in-house technical expertise in an area that is not part of their core business, thereby freeing up IT staff for other aspects of operations. This factor needs to be weighed against the higher recurring costs. On the other hand, larger enterprises typically maintain that over a longer time horizon and under a certain set of assumptions, the IP PBX option would yield a lower TCO.
- Other considerations: there are a host of other considerations including complexity of the overall solution (SMBs prefer not to deal with complex dial plans, hence their propensity to be more receptive to a hosted IPT offering), limited options (larger enterprises frequently mention this as an obstacle to hosted IPT adoption, as their choices would be confined to the service providers' line-up of supported products), management (centralized under the hosted IPT option versus dispersed for an IP PBX solution), full-featured survivability (another key item that tilts medium and larger-sized enterprises toward the premises-based IP PBX).

Overall, customers are indifferent about which technology is being used, but care about performance, ability to migrate at their own pace, lowering OPEX, and maximizing the investment already made on the legacy equipment. However, based on a recent Frost & Sullivan end user survey¹, smaller business sites with no internal IT resources are more likely to opt for a hosted solution. That is why, for instance, one of the surveyed vertical segments (the healthcare sector), in which small doctors' offices are the norm, typically has a preference for hosted solutions. From a broader perspective, we believe that the market segment up to 100 stations is more likely to choose hosted IPT as a way to outsource its telecom equipment (along with all the maintenance, warranties and support it requires) and to realize operational efficiencies of VoIP such as unified communications, call control and Outlook integration.

Besides the above mentioned migration strategies, there is also a third alternative which does not require neither a forklift upgrade to an IP PBX nor the retiring of the legacy TDM PBX in favor of a hosted IPT solution. This represents the VoIP/SIP trunking option, which is typically undertaken by enterprises that have made investments in PBX equipment, which still serves well their existing needs. VoIP trunking represents the transport of an enterprise's voice, data and Internet traffic over a single IP pipe. An IAD (integrated access device) or gateway connects the service provider network to the enterprise's PBX and LAN, without drastically varying the setup of the site's telephony system or LAN. SIP trunking can deliver to these enterprises some of the cost savings of

VoIP while simultaneously enabling them to leverage their existing infrastructure. In other words, SIP trunking allows these service providers to offer some of the broader benefits of VoIP to enterprises with traditional TDM PBXs.

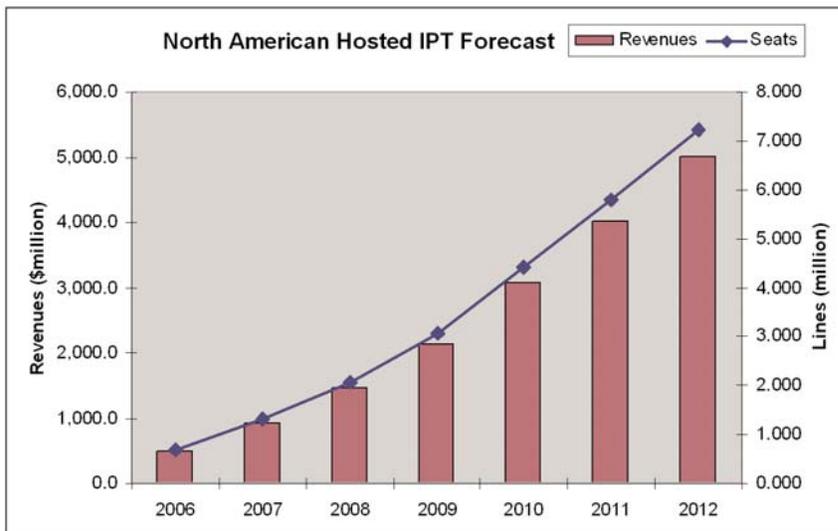
In this discussion paper, we will focus on hosted IPT and VoIP/SIP trunking alternatives. We will introduce a novel solution by Citel that can provide benefits above and beyond those of hosted IPT while simultaneously easing the pain points of a “rip-and-replace” migration from a legacy TDM solution to hosted IPT.

Market Forecasts for Hosted IPT and VoIP Trunking

The migration towards hosted IPT is gradually happening as enterprises evolve their solutions from legacy TDM PBX and Centrex solutions. Given the fact that TDM Centrex enterprises have already chosen the “outsource” option once before, they are more likely to move toward a hosted IPT solution. However, some may choose the CPE (IP PBX) path instead, as they might have experienced slow response times for MACs (moves, adds or changes). Similarly, some of the TDM PBX enterprises might decide to evolve their systems to the IP PBX architecture for the most part, but there will be some enterprises in the TDM PBX installed base that will instead choose a hosted IPT solution due to its flexibility, functionality and smaller upfront cost.

Hosted IP telephony has been available in the North American marketplace from circa 2000, but has captured only a limited penetration until now. Next-generation service providers have been initially focused on small and medium-sized businesses, which represent the main early adopter segment in this nascent market. Frost & Sullivan forecasts the hosted IPT market to grow from \$493.1 million in 2006 to over \$5.0 billion in 2012, representing a CAGR of 47.2%, as illustrated in the following figure:

Figure 2 –North American Hosted IPT Market Forecast (2006-2012)



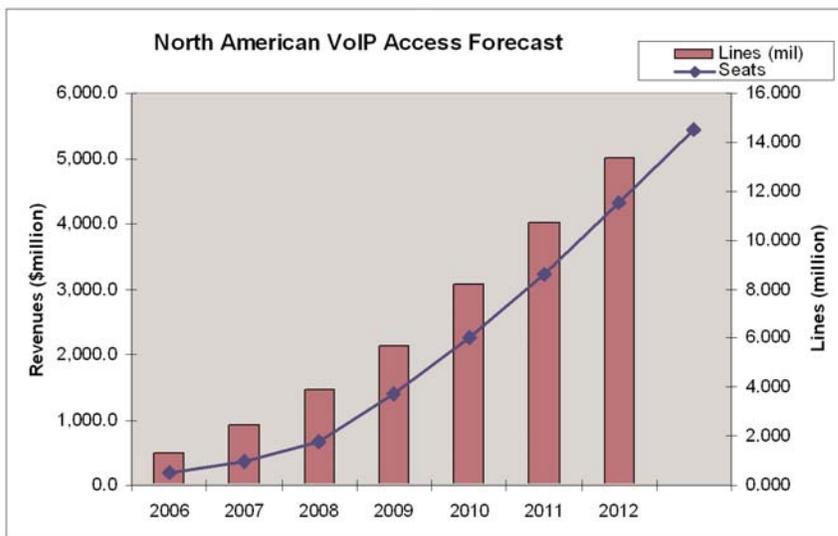
Source: Frost & Sullivan
Frost & Sullivan

During the forecast period, the number of hosted IPT seats in North America is expected to grow from 697,000 in 2006 to 7.22 million in 2012, which amounts to a CAGR of 47.2 percent. But as the VoIP/SIP trunking forecast results will show the 2012 figure still only represents a fraction of the total number of VoIP trunk lines.

Before introducing the forecast, we need to highlight the fact that VoIP trunking is also sometimes referred to as SIP trunking since it uses SIP (session initiation protocol) for call control. Some companies make the distinction that trunking refers to SIP trunking and integrated access or VoIP trunking are those that require the IAD. VoIP trunking delivers an IP broadband connection for point-to-point or multi-point enterprise networks, relying on SIP, that interwork with legacy PBXs, IP PBXs, gateways and the PSTN. Trunking can bring multi-site organizations IP connectivity to remote locations, including hosted services, and offers more capabilities to a VPN by creating one network among multiple branch offices. By keeping traffic off the PSTN and enabling enterprises to maintain their legacy KTS and PBX systems, VoIP trunking allows customers to incur significant savings in telecom expenditures. The key value proposition of VoIP/SIP trunking is these cost efficiencies, which usually amount to about a 20% savings in OPEX. Sometimes, H.323 can be used as the signaling protocol, but for the purposes of this paper, we assume that the VoIP trunking is done over SIP. Trunking services are offered by providers such as Broadwing, Verizon, AT&T, Cbeyond, XO and Time Warner Telecom.

Frost & Sullivan’s VoIP Access/Trunking forecast is shown in Figure 3 below.

Figure 3 –North American VoIP Access Market Forecast (2006-2012)



Source: Frost & Sullivan

The VoIP Trunking forecast shows that the number of trunking lines will increase from 950,000 in 2006 to about 14.52 million in 2012, corresponding to a revenue growth from

\$606.6 million in 2006 to over \$9.59 billion in 2012 (a CAGR of 58.4%). We also highlight the fact that included in these numbers are companies with IP PBXs that utilize SIP trunking to tie their branch offices together. Cbeyond has been a strong champion of SIP and the SIPconnect specification and is working in with Avaya, BroadSoft, Centrepoint Technologies, Cisco Systems, and Mitel Networks. However, we note that while there is a movement toward mixing and matching hosted and trunking offerings, the integration is still not very seamless in the majority of the cases, as only few IP PBX models are supported by certain trunking services.

Hosted IPT and VoIP Trunking Forecast Comparison

One interesting takeaway from the two forecasts that were presented is the success of the VoIP trunking option relative to the hosted IPT migration alternative. Despite the success of service providers such as Covad/Gobeam on the hosted IPT side, players such as Cbeyond, XO and Time Warner Telecom have been collectively amassing more lines sold annually. In 2012, for instance, they are expected to sell more than double of the number of lines than their hosted IPT counterparts.

Is it easier for these VoIP trunking providers to convert lines because they are more agile than the hosted IPT next-gen SPs? The answer is no - and the reason is that the sale of a VoIP/SIP trunking line is a lot easier to make than the sale of a hosted IPT seat. All that is required is for a VoIP trunking sales engineer to pitch the 20% OPEX savings, introduce the concept of the IAD and the extra benefits in terms of value added applications and expansion of the lifetime of the existing equipment.

By contrast the hosted IPT sale is much more difficult, as customers need to evaluate the solution, determine extra costs for writing off their existing equipment and refurbishing their infrastructure including LAN and desktop phones. A business case needs to be made and the enterprise needs to evaluate it before making the decision of whether or not to embark on the hosted IPT path.

Another factor that confirms the extra difficulty in selling hosted IPT versus VoIP trunking is in the length of the sales cycles. Our discussions with various service providers revealed that the average length of the sales cycle for a SIP trunk is only roughly two weeks. On the other hand, the average length of the sales cycle for a hosted IPT seat tends to be around two months, which is about four times as long when compared to the VoIP trunking sales cycle.

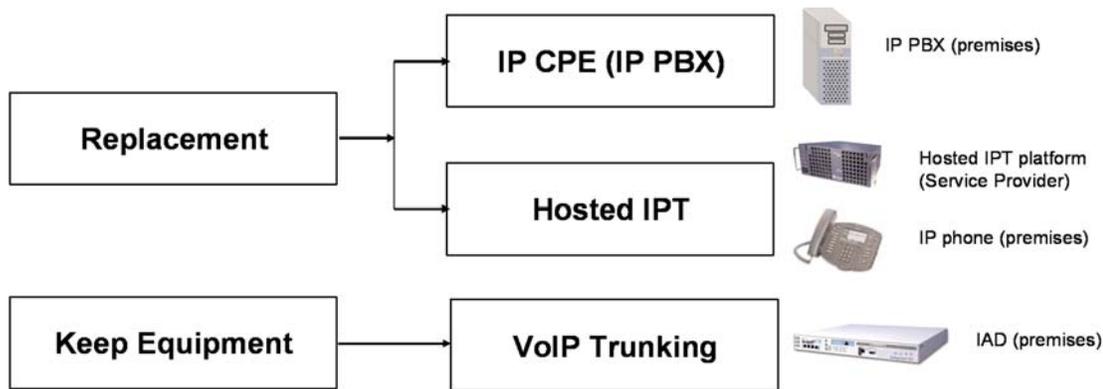
In addition, there are various other challenges for hosted IPT that we have identified in a recent study², including the fact that the actual installation of hosted services may prove to be more complicated than customers expect and the need for hosted providers to better educate VARs and other channels on how to sell and service hosted offerings.

2. "North American Hosted IP Telephony and VoIP Access Services Market", N01F-63
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IP MIGRATION OPTIONS

An enterprise willing to evolve its existing TDM PBX system is faced with the decision of whether or not to keep its existing infrastructure (via VoIP/SIP trunking) or consider a replacement strategy in which it can take the CPE (IP PBX) or off-premise (hosted IPT) options. This is shown in the following illustration:

Figure 4 –IP Migration Options



Source: Frost & Sullivan

Companies seeking a more gradual transition towards IP and desiring to maximize the return on their existing infrastructure typically are more inclined to choose the VoIP trunking option. Trunking enables enterprises to overlay their existing PBX or key system with enhanced features. The benefits of VoIP/SIP trunking are almost instantly realizable and the solution’s ROI is attractive, due to the average 20% savings in OPEX. With this approach, the enterprise continues to use its existing phone system and with a premise-based gateway, voice and data traffic is combined onto a single IP connection. The company benefits from lower bills for local, long-distance and toll-free calling and also gains some features such as VoIP VPN with abbreviated dialing between locations, hunt groups, conferencing, auto attendant, voicemail, and a web-based call management interface.

That said a hosted IPT offering can deliver additional benefits, including enablers such as mobility and presence, and a host of value-added applications including unified communication and simple-to-use conferencing. But as discussed before, because hosted IPT involves a “rip-and-replace” consideration, the sales cycle is longer and companies have to consider TCO/ROI models before committing to the solution. More importantly, for both replacement strategies (IP PBX and hosted IPT), enterprises have to be close to their “decision point” or “event trigger,” which can be one of the many factors that we discussed in the Introduction (end-of-life of existing PBX, greenfield site, office consolidation, etc.). By contrast, the VoIP/SIP trunking decision can be taken at any point during an enterprise’s PBX product life cycle.

It would be highly desirable to somehow combine the instant benefits of VoIP/SIP trunking with the enhanced applications (that positively impact employee productivity) from a hosted IPT solution. This new migration alternative would allow companies to keep their existing infrastructure but gain the benefits of hosted IPT without being faced with higher upfront costs.

INTRODUCING THE CITEL PORTICO™ TVA™ SOLUTION

This Citel Portico™ TVA™ (Telephone VoIP Adapter) can bring the above benefits to an enterprise. This product functions similarly to an IAD behind a PBX in a VoIP trunking configuration, but differs in that it offers VoIP feature pass-through and additional functionality to endpoints already installed in the enterprise. Only the actual PBX chassis is removed from the enterprise. The Portico™ TVA™ simply connects to the PBX patch panel, avoiding the LAN altogether, providing hosted IPT functionality over existing Cat3 wiring.

The Portico™ TVA™ solution addresses the key painful points for an enterprise considering a hosted IPT solution, by substantially lowering the upfront costs and allowing it to leverage existing handset and wiring infrastructure, which results in savings in training costs and higher employee productivity (due to the familiarity with the existing features and phone sets). The advantages of the Citel approach are listed below:

End-user Benefits

- **Features:** Citel's Portico™ TVA™ solution delivers enterprise end-users more features than basic SIP trunking, resulting in enhanced employee productivity. The Portico™ TVA™ delivers a host of value added features including busy lamp field (BLA), shared call appearance, bridge line appearance (BLA), FXO/POTS support and almost any other SIP feature offered by a hosted IPT provider, (e.g. DID/DOD, call forwarding, call transfer, hold, park, conference, etc.).
- **Maximizes the ROI on the existing infrastructure:** The enterprise can gradually migrate to VoIP at its own pace, without the need to undertake a forklift upgrade. LAN upgrades to accommodate for the additional bandwidth and QoS requirements of voice are unnecessary.
- **Little training required:** Since Citel's solution leverages the existing CPE infrastructure, the employees will use the same phone sets to which they are accustomed. Moreover, the end users can also leverage the existing PBX functions with which they are already familiar and take advantage of some new, hosted IPT features as well. VoIP features that cannot be delivered to legacy handsets due to the limited screen size can easily be delivered via softphone or browser applications on a laptop or desktop computer.
- **No disruption to the business:** Since installation is straightforward, the project can be done with minimal disruption to day-to-day operations. Unlike the hosted IPT sale, which requires a LAN assessment, PoE (Power over Ethernet)

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installation for IP phones and a variety of other labor-intensive activities, Portico™ TVA™ can be offered incrementally without the need of a long sales cycle.

Service Provider Benefits

- **Easier sales pitch than hosted IPT:** Since the Portico™ TVA™ entails a lower upfront cost (including many “hidden” costs such as LAN upgrades, new wiring, and training), the value proposition is easier for a hosted IPT service provider to make. Moreover, it does not require an enterprise to be close to retiring its existing PBX, so the sales pitch can be made at any time during the PBX product life cycle, even if the PBX is relatively new.
- **Simple installation:** Citel’s solution dramatically reduces the IP installation process, as it is fairly straightforward to set up when compared to a hosted IPT offering that might entail new cabling runs (Cat3/5 replacement) and LAN assessments (which entail transporting traffic generators to stress test the existing office LAN).
- **ROI for the service provider:** With the Portico™ TVA™, a hosted IPT service provider has the opportunity to upsell basic VoIP trunking and to generate a higher ARPU that is comparable to a fully featured hosted IPT solution.
- **Straightforward maintenance:** The Portico™ TVA™ allows quick firmware and other upgrades in addition to the remote setup of some features without the need to a site visit.
- **Sensible solution:** Citel enables the service providers to manage their own growth so that their services and networks meet customer needs. In other words, instead of being bogged down by interoperability headaches, and the varying maintenance requirements of LAN infrastructure and endpoints, providers can focus on quickly capturing market share and improving their bottom line.

ASSESSING THE IMPACT OF THE CITEL PORTICO™ TVA™

The Portico™ TVA™ can positively impact the hosted IPT market by significantly reducing the barriers to a wider adoption of the technology. In this section we will discuss a cost comparison between a “rip-and-replace” migration to hosted IPT and an alternative implementation of SIP trunking with Citel’s gateway solution. Then, we will present a heuristic behavioral model to assess the potential impact of the introduction of the combined Portico™ TVA™ and SIP trunking on the North American IPT market.

Cost Comparison Between Hosted IPT and Portico™ TVA™ with SIP Trunking

In order to assess the benefits of opting for a migration path with the Citel gateway solution incrementally sold along with a SIP trunking deployment and a hosted IPT

implementation, it is necessary to initially assess the upfront cost savings to the end user enterprise. Figure 5 summarizes the differential between the upfront costs of a rip-and-replace hosted IPT strategy and the Citel Portico™ TVA™ solution (which retains the entire existing handset and wiring infrastructure). In this particular example, we assumed a 50-employee enterprise. As can readily be seen, the CAPEX savings of the Citel approach are quite substantial (almost \$300 per endpoint).

Figure 5 - Cost Comparison: Hosted IPT x Portico™ TVA™/SIP Trunking

Cost Item / Strategy	Hosted IPT “Rip & Replace”	Portico™ TVA™ and SIP Trunking
Cost per Station for LAN Assessment	\$70.00	\$0.00
Cost per IP Station	\$200.00	\$0.00
LAN Switch Port (including PoE - Power over Ethernet)	\$80.00	\$0.00
Cost per Station for Citel Portico™ TVA™/gateway	\$0.00	\$100.00
Installation Cost per Station	\$52.50	\$15.00
End-user Training Cost	\$15.00	\$5.00
Total Upfront Cost of Solution:	\$417.50	\$120.00

Sources: Citel, Frost & Sullivan

Quotes shown above are based on list pricing for the various components:

- The LAN assessment cost is based on primary research of VARs and some system integrators, which typically charge \$3,500 per site visit for this activity. Taking the \$3,500 fee and dividing it by the 50 employees yields a per-station cost of \$70. With the Portico™ TVA™ solution, VoIP services are delivered via the existing cat3 wiring infrastructure. As such, a LAN assessment is not necessary.
- The \$200 price tag per IP station (for the forklift hosted IP strategy) corresponds to the aggregate weighted average street price of various IP phone models (from manufacturers such as Polycom) that are typically sold by hosted IPT service providers. Since the Citel solution preserves the original investment made in legacy sets, the cost assumed is zero.
- The pricing per LAN Switch Port was also derived on a weighted average street price of various solutions including Power Dsine and the Cisco Catalyst series and that number came to roughly \$1,920 for an average capacity of 24 ports, corresponding to a price per port of \$80.00.

- The cost for the Citel Portico™ TVA™ was entered as a separate line item and corresponds to the average street price of \$100.00 per port assuming a 24-port configuration.
- The installation cost per station was assumed to be approximately 15 percent of the per-station price total of all the above items (except for training) and came to about \$52.50 per station for the hosted IPT case versus \$15.00 per station for the Citel solution.
- Given that Portico™ TVA™ maintains the existing PBX phones, functionality at the handset level generally remains the same so training costs associated with it are much lower than those of training an end user on a new IP phone (for the hosted IPT case). The nominal fee of \$5 for the Citel solution takes into account a few extra hosted IPT features that could be incorporated into the legacy handsets, and additional applications offered using softphone or browser applications on a laptop or desktop.

The upfront CAPEX savings of the Citel solution when compared with a “rip-and-replace” hosted IPT implementation are roughly 71 percent on a per-user basis. Therefore, SMBs willing to migrate their infrastructure to IP can do so in a more immediate, yet gradual and cost-effective way with a Portico™ TVA™ solution sold alongside or in addition to a SIP trunking implementation.

To further reduce sales objections and the overall sales cycle, some service providers will opt to absorb the initial cost of the Portico™ TVA™ and to either partially waive it (for subscribers signing longer-term hosted IPT contracts, such as is common with mobile wireless service providers) or to include it as part of an enterprise’s monthly services bill. This can further reduce and shift the initial CAPEX requirements to OPEX in exchange for a longer-term commitment to a service provider.

Portico™ TVA™ Potential Ramifications to the North American Hosted IPT Market

A probabilistic behavioral model was devised to prognosticate the potential impact of the Citel solution to the overall hosted IPT market. In other words, this model assesses the potential growth in demand for hosted IPT due to the introduction of solutions such as the Citel Portico™ TVA™. This can lead to service providers’ offering hosted IPT services without having to go through the hurdles of a “rip-and-replace” strategy to migrate enterprises with in-place legacy PBX hardware.

Existing TDM PBX customers considering SIP trunking alongside the Citel solution can eventually migrate over to hosted IPT solutions at their own pace. Our model evaluates the potential extra number of subscribers who may consider SIP trunking or a hosted solution, including the Citel solution. We then add this extra number of seats to our original forecast and to then derive a new estimate for the total number of hosted IPT seats sold in North America from 2007-2012.

The heuristic framework is premised upon the following set of assumptions:

- Enterprises typically expect to write off their investment in an enterprise PBX within a period that can range from 7 to 10 years, so they expect their PBX system would last at least that long in order to get the return on their investment.
- In order to consider SIP trunking, an enterprise can be anywhere within its PBX life cycle; for hosted IPT, it is more commonly near the end of that cycle.
- The older the PBX system, the more likely the customer is to consider migrating to a new solution (be it SIP trunking, hosted IPT or even IP CPE).
- Customers with smaller installations have a higher propensity to migrate to IP.
- In a recent end-user survey, Frost & Sullivan found the following levels of interest in hosted IPT for the 5-99 employee enterprise segment:
 - ↳ 22% not interested at all
 - ↳ 51% moderately interested
 - ↳ 27% highly interested
- From the above survey, we derived an interest level of roughly 53%, corresponding to the highly interested and half of the moderately interested segments.
- The key considerations for moving to hosted IPT (according to the same survey) are: reduced toll and long distance OPEX, increase in employee productivity, disaster recovery and telecommuting.
- A probabilistic decision-based model was considered for the decision makers, in which the installed base will be making a choice to change within the next 7 years. The inputs were based on price elasticity of demand, Frost & Sullivan survey data and some primary research.
- Three evenly distributed threshold values were selected for comparison purposes, corresponding to a low, medium and high probability to make a decision within that time frame.

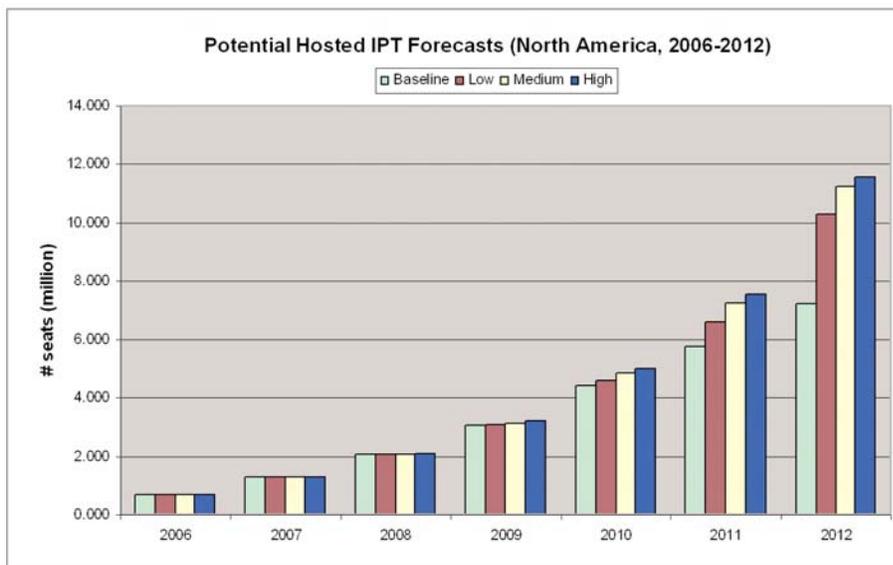
The results are tabulated in the next figures. We have also graphed the potential increase in demand of hosted IPT and provided the new three estimates for what the overall North American hosted IPT market will look like. For example, beginning in 2008, the baseline figures increase by the figures in the columns labeled “Extra Hosted IPT Demand.”

Figure 6 – Assessment of the Potential Increase in Demand in Hosted IPT (North America) Based on Frost & Sullivan Behavioral Model

Scenario	Baseline	Extra Hosted IPT Demand			New Hosted IPT Forecast		
		Low	Medium	High	Low	Medium	High
Year	Lines (mil)	Lines (mil)	Lines (mil)	Lines (mil)	Lines (mil)	Lines (mil)	Lines (mil)
2006	0.697	0.000	0.000	0.000	0.697	0.697	0.697
2007	1.310	0.000	0.000	0.001	1.310	1.310	1.311
2008	2.070	0.001	0.011	0.020	2.071	2.081	2.090
2009	3.060	0.021	0.093	0.142	3.081	3.153	3.202
2010	4.430	0.165	0.440	0.583	4.595	4.870	5.013
2011	5.790	0.827	1.489	1.764	6.617	7.279	7.554
2012	7.220	3.062	4.009	4.333	10.282	11.229	11.553

Source: Frost & Sullivan

Figure 7 – New Hosted IPT Forecasts (North America, 2006-2012) Based on Frost & Sullivan Behavioral Model



Source: Frost & Sullivan

Based on our model, we have seen that by the end of the forecast period, our three hosted IPT estimates have gone up 42.4%, 55.5% and 60.0%, respectively, each corresponding to our low, medium and large threshold values. However, as the behavioral simulation indicates, the impacts will not be felt until early 2008, as the channels need to become educated and the story needs to be propagated.

CONCLUSIONS

As Dale Carnegie, the original motivational speaker, once said, "Discouragement and failure are two of the surest stepping stones to success." Hosted IPT is a state-of-the-art technology that is still being set back by the fact that enterprises need to reach a certain decision point to make the switch to an off-premise solution. ROI models need to be evaluated, their LAN needs to be assessed, older infrastructure needs to be replaced and that ultimately makes the sales pitch of hosted IPT more difficult and time consuming.

However, with the advent of a novel solution such as Citel's Portico™ TVA™, enterprises can transition to VoIP in a much more gradual, transparent fashion, by deploying Hosted IP telephony alongside the Citel solution. To Hosted Service Providers, this incremental sale is much more straightforward, and its business case is much easier to make.

Frost & Sullivan believes that Citel's solution should have great appeal particularly in the small and medium segments of the hosted IP telephony marketplace, as these sectors will undoubtedly find the smaller upfront cost quite appealing (a savings of about \$300 per station, which can be even higher if some service providers are willing to partially or completely absorb or amortize the cost via slightly higher monthly fees). These SMBs will be able to achieve considerable cost savings associated with IP endpoints, installation, switch ports, QoS upgrades and training.

In a world of fast advances in technology, Portico™ TVA™ makes sense as it mitigates the technology risk, while allowing an enterprise to leverage its existing infrastructure and achieve higher employee productivity with value added applications. Assuming Citel can nurture strong channel and service provider relationships, we believe that the company is poised to capture good mindshare in the next-gen hosted IPT space.

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