AOTMP

Catching Costs and Crooked Calls: VoIP Call Accounting

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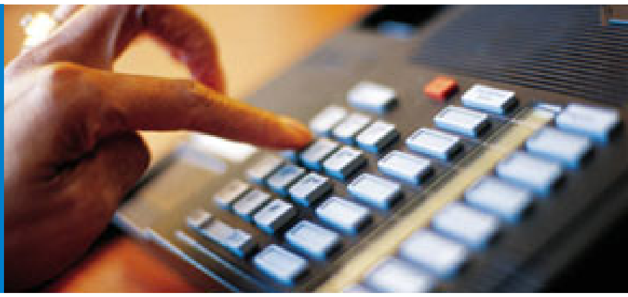
Insider's Guide



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Proper implementation of call accounting software can present a great profit-generating opportunity for any enterprise looking to gain visibility into their telecom usage.

Executive Summary

The development of voice over IP telephony has brought with it concerns and misconceptions. This is especially true with call accounting. Flat-fee rate structures and reductions in traditional pay-per-minute calls for VoIP traffic, as compared to familiar public network toll voice traffic, have left many enterprises questioning the value of call accounting in their VoIP environment. Upon further inspection, however, VoIP call accounting is little different from its PSTN counterpart, and proper implementation of call accounting software can present positive cost control, cost containment and cost allocation benefits for any enterprise seeking to gain visibility into their telecom costs.

PSTN versus VoIP Traffic: Delving into the Great Unknown

For years, the Public Switched Telephone Network (PSTN) was the only telephone service available. This network of public switches exclusively carried telephone traffic until the advent of high-bandwidth data networks and VoIP systems. It is important to note that these two networks have many differentiating characteristics that affect the practice of call accounting.

PSTN	VoIP
Analog connections	Digital connections
Toll traffic billed using cost per minute (CPM) model	Many billing methods – flat fee subscription service, limited free calling, nominal transactional charges
Voice travels over public switched voice infrastructure	Voice travels over public (Internet) and private (VPN) IP infrastructure

The fact that VoIP traffic can travel over multiple IP network configurations allows VoIP to be more flexible than traditional PSTN-based switched voice networks. Furthermore, VoIP traffic travelling over a private IP network will have no transactional charge attached to it. It is this fact that fuels the misconception that *all* VoIP traffic is free, thus making call accounting a moot point. However, enterprises that stand to profit under a PSTN call accounting system can also profit in a VoIP environment.

The differences between the PSTN and VoIP traffic boil down to a difference in the way the data travels. Time-division multiplexing and IP packetization are two vastly different transfer methods.

TDM	IP Packets
Requires continuous connection between two endpoints	Does not require continuous connection; traffic may travel multiple pathways to reach destination
Traffic is prioritized and appears in a precisely timed order	Traffic is prioritized by external software; packets are assembled at destination
Travels over traditional carrier-based PSTN facilities	Travels over an IP-based network; VPN, Intranet, Internet, etc.

Because of these differences, the demands on VoIP call accounting and TDM accounting methods are slightly different; however, the two methods share the identical needs of visibility, fraud detection and chargeback support.

Call Accounting 101

For years, PSTN call accounting was a simple and easy-to-understand process. Traffic on the PSTN was billed according to time of a call multiplied by a rate. Call accounting software tracked calls, lengths of calls, and, in turn, the total costs of these calls. In the VoIP world, however, rates may vary widely depending on the connection between two endpoints, which can create complexity in billing and call tracking.

What is often overlooked is that call accounting in a VoIP environment is just as simple – and just as useful – as it is in TDM environments. Call accounting software has been created to deal with the varied structure of VoIP billing. This increased visibility carries with it a number of benefits.

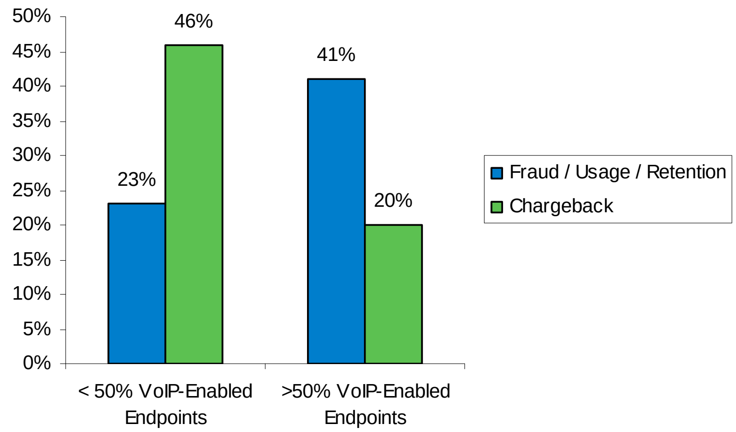
PSTN Call Accounting	VoIP Call Accounting
Fraud Detection: Non-business related calls can be identified, monitored and rectified	**Fraud Detection:** The same benefits can be found in a VoIP installation
Visibility: Usage patterns, charges and business processes can be monitored and adjusted accordingly	**Visibility:** Though the billing system may be different, the same benefits can be found in VoIP
Chargeback: Business units can be charged according to the amount of traffic used	**Chargeback:** VoIP traffic may be flat-fee or nominal fee based, but business units can be charged according to the proportion of total traffic utilized
Technical issues: Billing errors, technical errors and traffic volume analysis can assist an enterprise in optimizing their telecom environment	**Technical issues:** Data from call accounting can be used to determine future bandwidth needs

The very same benefits that make call accounting useful in a PSTN environment apply in a VoIP environment. Enterprises embracing the new world of VoIP call accounting will meet with great success.

Catching Calls and Crooked Costs

What is most interesting about VoIP call accounting trends is the perceived value of the practice within an enterprise. As the number of VoIP-enabled endpoints increase, so does the probability that these enterprises will see great value in detecting fraud within their system.

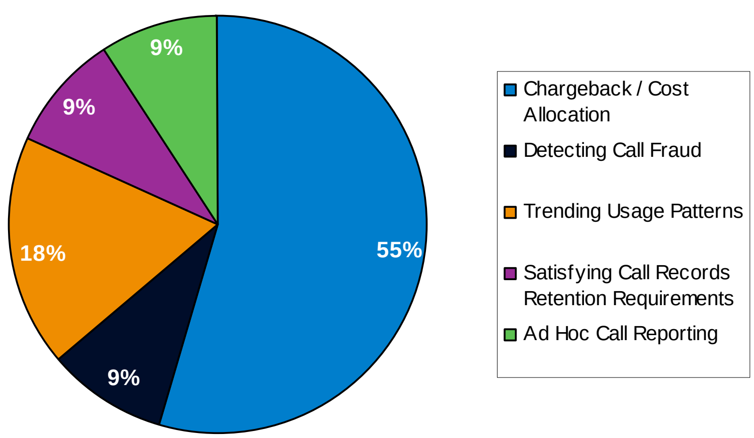
Figure 1: Top Call Accounting Objectives



Source: AOTMP, November 2008

Additionally, a majority of enterprises will see chargeback abilities as a primary use for call accounting. Even though a VoIP installation may be billed according to a system that doesn't directly support call accounting, maintaining visibility as to which departments are using the most telephone bandwidth remains an important factor in assessing future policies, charging GL units, and assuring that accountability is maintained on a person-by-person basis.

Figure 2: Top Call Accounting Benefits



Source: AOTMP, November 2008

It is catching these costs that makes call accounting so powerful, whether in a PSTN environment or a VoIP environment.

Many Systems, Many Methods

VoIP call accounting systems can expand, contract and be modified to fit any business need. Systems may be web-based, Software-as-a-Service, directly attached to a PBX, run from a personal computer or any combination of the above. Hardware and software solutions exist for any budget and any call volume. Business needs will determine the precise nature of the VoIP call accounting installation.

AOTMP Standards and Best Practices for VoIP Call Accounting

The following best practice activities for VoIP call accounting are based on AOTMP expertise, research and analysis.

- **Implement call accounting on VoIP endpoints to increase visibility.** The data collected from these call accounting reports can be invaluable when designating chargebacks, identifying fraud, generating effective policies or simply monitoring end user productivity.

- **Use information from call accounting to actively manage the telecom environment.** Data can be used to assess bandwidth needs, structure policy and user class of service (CoS) profiles, and optimize network performance.

- **Create policies that include call accounting as a metric and a tool for enforcement.** Call accounting information should bring to light opportunities for cost containment and cost control within the telecom environment. Proper structure, management and active enforcement of telecom policies will help enterprises optimize policies to meet specific performance objectives.

Conclusion

The misconception that call accounting is a relic of the days of the PSTN keeps enterprises from fulfilling needs. The basic premise that makes PSTN call accounting an effective tool for telecom environment management has not gone away. VoIP-enabled environments face many of the same challenges and issues of visibility that PSTN environments face. A VoIP call accounting system assures that these needs are seen, diagnosed, and resolved, yielding positive hard- and soft-dollar savings in the long run.

About AOTMP

AOTMP is the leading provider of information solutions for managing telecom and IT environments. AOTMP's proprietary certifications, benchmarks, standards and best practices deliver measurable improvement in efficiency and productivity for managing wireless, voice, data and network services. From Fortune 50 companies to SMB, enterprises seeking the best return on telecom and IT services turn to AOTMP's industry research, advisory services, events, educational programs and performance management systems to achieve operational and financial efficiency.

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