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Using Call Completion to Boost Revenue

By Jeff Epstein

Overview

Increasing the number of calls made and the percentage of completed calls are the two most important things service providers can do to drive revenue. Voice, not data, still brings in the majority of income (75%) from subscribers, whether the accounts are prepaid or postpaid. Although the percentage of revenue from data is expected to continue climbing as applications such as mobile web browsing grow in popularity, voice revenue in the near future will continue to bring in the lion's share of income for operators.

The main reasons calls are not completed include:

1. The called party is on another call
2. The called party's phone is off or out of coverage
3. The called party chooses not to answer the call
4. The calling party hangs up before the called party answers

All of these situations result in a waste of network resources, as systems are used but no billable activity occurs.

The simplest way for a call to be completed is for the called party to answer the phone. However, only 50-70% of dialed calls are completed and paid for, and Yankee Group estimates that only 35% of all wireless subscribers leave their phone on for more than 8 hours a day; therefore, other methods need to be used to convert unbillable network activity into revenue generating minutes, helping operators recover potential revenues.

In addition to the added revenues obtained from the completion of more calls, a more subtle benefit of call completion services is the increased customer satisfaction generated. Many subscribers are uncomfortable when they are unable to contact their friends or

loved ones, and knowing that the called party will be contacted in one way or another is reassuring.

The call completion rate can be improved by increasing the number of calls made, increasing the percentage of calls completed, or both.

The first commercially successful method of increasing the call completion rate occurred with the introduction of the answering machine for fixed lines. These devices initially stored messages on audio cassettes, and later in digital form, allowing a caller to deposit a voice message for those unable or unwilling to answer their phone. The device was usually placed next to the called party's phone. With mobile phones, there was no place to put a physical device to handle unanswered calls, so server-based voicemail grew in popularity. These systems stored voice messages in a central server and

were accessible at any time from mobiles, and often landline phones with a password.

Voicemail usage became dependent on a variety of issues, mainly cultural and financial. In some countries, it's considered impolite not to talk directly to the person and callers would prefer to re-dial repeatedly until they connected. In other locations, calling in to voicemail either used up minutes or cost the caller money to hear their messages, and many preferred to ignore their voicemail.

In some countries, voicemail comes bundled with basic service, and is thought of as a commodity. Even so, voicemail is estimated to be used by no more than 45% of mobile users globally.

One-way Communication

Call Completion strategies do not include one-way methods of mobile

communication (Intentional Messaging), where a user is delivering information without needing immediate feedback, including:

Short Message Service: SMS is the most popular form of non-verbal communication in the mobile community, both in terms of subscriber usage and revenues. With over one trillion text messages sent in 2007, and an annual growth rate approaching 20%, SMS will remain hugely successful for years to come. SMS allows the transmission of up to 160 characters of text in one message.

Multimedia Message Service: MMS is an evolution of SMS, allowing for the sending of sound, pictures, and video, in addition to text. MMS has been a disappointment in the telecommunications industry, never achieving the levels of usage originally anticipated. The majority

of phones sold in recent years are MMS capable.

Email: The 'killer app' of the desktop has migrated to the mobile phone. Not all mobile phones can provide mobile email, as client software is usually needed.

Voice SMS: Voice SMS allows a user to record a message, have it stored on a server, and a link sent to one or more parties allowing them to listen to the message. Voice SMS is a relatively new application and is growing rapidly in popularity.

Video SMS: The same as Voice SMS, but with video.

Instant Messaging: IM, popularized on the desktop by industry giants such as Skype, Yahoo, and AOL, is making a move to mobile handsets and is likely, in time, to take some of the growth currently expected for SMS. Client software is necessary for IM to function on a handset.

Call Completion Strategies

There are a wide variety of methods to increase the call completion rate.

Voicemail: Perhaps the simplest and oldest method used to complete a call is voicemail. The caller is prompted, often in a personalized message from the called party, to leave a voice message. These outgoing messages can be enhanced with humor or music, or a celebrity greeting can be inserted. For example, a famous athlete or entertainer could be heard saying "My good friend isn't available now, but please leave a message." Research has shown that the use of humorous or celebrity recordings have increased the likelihood of a caller leaving a message.

Voicemail can, depending on the system, be retrieved from the mobile handset, from a landline, or from a web interface, using a unified mailbox. Unified mailboxes

can store voice and video messages, in addition to fax and email. Newer systems can also come with text-to-speech functionality.

Problems with voicemail are:

1. Statistics show that up to 60% of voicemail boxes receive only zero or one message per month, resulting in a large quantity of unused storage.
2. In many parts of the world, voicemail is seen primarily as a business tool rather than a personal tool.
3. Up to 80% of calls diverted to voicemail result in a 'slam down', or the caller hanging up before leaving a message.

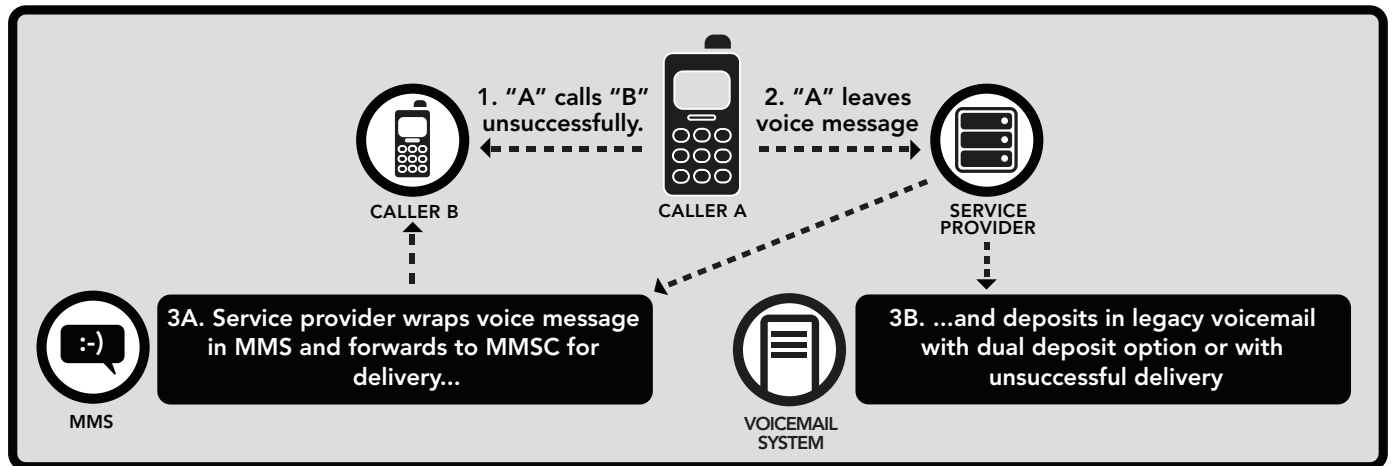
Regardless of these issues, voicemail has proven to be a strong method to increase the number of calls completed and returned.

Videomail: Videomail acts in the same way for video calls as standard voicemail does for audio calls. A video message, often personalized, is played for the calling party, telling them to leave a message. The outgoing messages can be enhanced with cartoons, videos, and avatars, in addition to audio. Video messages to handsets that are not video capable must be transcoded to voice only.

Voice to MMS: Voice to MMS (V2MMS) is an alternative delivery ("push") mechanism for voicemail. It involves taking a voicemail deposit, wrapping it into an MMS message, and sending to a caller's MMS-capable phone. V2MMS has several advantages over server based voicemail:

1. Messages are stored directly on the subscriber's handset in the MMS inbox. This visual voicemail interface eliminates the caller's need to dial in and navigate

Voice to MMS Delivery



often-complex menus to hear messages. Additionally, subscribers are spared the need to use costly minutes to hear their messages.

- Customers can personalize the system, setting up specific pictures to be appended to the message depending upon the caller. For example, a picture of your house could be sent when a call is received from home, or a spouse's picture attached when they call.
- Service providers can increase revenue with V2MMS by adding on advertisements to the MMS in the form of pictures, logos, avatars, and video.
- Many service providers installed MMSCs in the past and these are sitting under-utilized, as MMS usage is still a fraction of SMS. V2MMS takes advantage of these existing assets.

Voice to MMS also functions as a form of visual voicemail, as all messages are stored on the handset, and can be viewed and accessed in any order, requiring no special client software other than being MMS capable.

V2MMS can be set up to deliver deposited messages to the subscribers handset, to a legacy voicemail system (in case the mobile is turned off), or both.

Missed Call Alert: Missed Call Alert (MCA) sends an SMS text message to a subscriber whose mobile is turned off, out of range, or in use. The message usually includes:

- Calling party's phone number
- Date of call
- Time of call

Additional information, such as the number of times the calling party attempted to call, or a number of different callers, can all be sent in the same text message.

Missed Call Alert messages were originally designed for callers without voicemail, but have expanded to include 'slam downs', callers who hang up when presented with the option of voicemail. As stated earlier, up to 80% of all calls directed to voicemail result in slam downs, with no voice message deposited.

One major advantage of MCA is that virtually all phones sold globally are SMS capable, thus making it the one Call Completion strategy able to be implemented anywhere.

A simple Return on Investment (ROI) model shows how quickly revenue can be gathered with MCA.

- # of subscribers 1,000,000
- % who use MCA 20%
- # of missed calls per day 1
- % of returned calls 10%
- Cost per minute of call €0.10
- Average call length (minutes) 2
- Monthly revenue €120,000

With only 20% of callers using MCA, and only 10% of the calls being returned, a rapid ROI is assured. Reports actually indicate that 50-85% of calls are returned when SMS alerts are used.

Dynamic Voice Mailbox: Dynamic Voice Mailbox allocation reduces the number of mailboxes to a fraction of those required in a standard setup. With Dynamic Voice Mailbox, subscribers do not have a permanent mailbox allocated for their use. Instead, storage is allocated as needed.

A caller who is unable to connect with the person they're dialing will hear a generic message such as "The person you're trying to reach is unavailable. Press one if you would like to leave a voice message." If the caller chooses to leave a message, storage is dynamically allocated. After the message is deposited, an SMS is sent to the called party informing

them that a message is waiting, along with who left it and when, and instructions for listening to the message, often as simple as "Press one now to be connected to your message."

Once the caller has listened to the message, it can be deleted, and the storage freed up for another call. Preliminary evidence suggests that only 25% of the storage is necessary compared to a traditional one-mailbox-per-subscriber system.

Options include the delivery of the voicemail via MMS, as with V2MMS, and the notification via SMS of callers who 'slam down', opting not to leave a message, as in Missed Call Notification.

Dynamic Voice Mailbox decreases CAPEX, in the need for less hardware for voicemail storage, and fewer licenses, and reduces OPEX, through reduced power needs and maintenance personnel.

Find Me/Follow Me: This service allows a subscriber with multiple phone numbers (e.g. mobile, home, office) to have one number which, when called, dials each of the other numbers sequentially until one is answered. For example, the call could be routed to the office number first. If it's not answered after a configurable time or number of rings, the call is then routed to the mobile, and then to the home number. If the call is never completed, it is routed to voicemail.

Options for Find Me/Follow Me include altering the order in which calls are routed, for day, time, or who's calling, or ringing all lines simultaneously.

Find Me/Follow Me has not been the commercial success that service providers anticipated. However, the addition of information such as presence and customer preferences, will allow the network to tailor the delivery of messages exactly as the

customer wants to receive them. For example, if the subscriber is going to be in a meeting, it could be set so that voice messages are delivered as text rather than voice.

Notify Me: After an unsuccessful call, Notify Me allows the calling party 'A' to be notified via an SMS text message when the called party 'B' is once again available. For example, if B's handset is turned off when the call is made, 'A' will be notified when 'B' is available on the network again.

Call Me Back: After an attempted call from 'A' to 'B' which 'B' did not answer, 'A' can choose the Call Me Back feature and disconnect. When 'B' is available on the network again, the phones for both 'A' and 'B' will ring, then be bridged together when they both answer.

International Calls

Calls made between international gateways may lose signaling data, requiring callers to re-enter the called party's number in order to leave a voice message. This often

results in callers hanging up in frustration, reducing the number of completed calls. There are network enhancements available to alleviate this problem, although since the introduction of the CAMEL protocol by Network Equipment Providers, this problem has been reduced significantly.

Caller Based Strategies

The majority of techniques available to increase the Call Completion Rate focus on the called party, either making it possible for the call to be completed, albeit in a different manner than intended (voicemail), or notifies the called party of a missed call (Missed Call Alert). However, there are also methods available which focus on the calling party.

Prepaid without Credit: It is estimated that 75% of all mobile phones in the world use a prepaid calling plan, and up to 90% of new subscribers choose prepaid as well. Additionally, at any given time, it is estimated that 30% of these phones are without credit, and thus unable to initiate calls.

Prepaid without Credit has several implementation possibilities:

- Call burst: Caller 'A' is unable to speak to called party 'B', but 'A's calling information is sent to 'B's phone, mimicking a missed call. 'B' will often then return the call.
- Call collect: Called party 'B' is informed that 'A' wishes to speak with him, but must agree to pay for the call. In many parts of the world, the system is set up as Calling Party Pays.
- Calls paid for by advertising: Calling party 'A' is allowed to make a limited duration (e.g. 30 second) call after listening to a paid advertisement
- Lost call: An SMS text notification, similar to a Missed Call Alert, will be sent to the called party, informing them that 'A' attempted to call them. Calling party 'A' could be given an option, upon trying the call, to have a notification sent to the 'B' party. Advertising can also be appended to the notification message.

To prevent abuse of the system, safeguards can be put in place to limit how often in a given time a caller without credit can use these methods.

These methods all increase the number of calls returned.

How to Increase Your Call Completion Rate

Intervoice, with its Call Completion Suite, is an excellent choice for operators looking to significantly increase their call completion rate. Call Completion Suite is comprised of a variety of applications which can be used individually or together, including:

- Voicemail
- Videomail
- Missed Call Alert
- Abandoned Call Alert
- Call Alert Plus
- Voice to MMS

A key advantage of the Intervoice Call Completion Suite is its underlying platform, Intervoice's Media Exchange with HomeZone.

Media Exchange is a flexible, IP-based multimedia enhanced services framework that actually delivers on the promise of being open, extensible, and modular. Media Exchange provides a robust suite of applications, all designed to work individually or in combination, and allows operators to rapidly integrate new features and services. The innovative Media Exchange platform uses state control functionality to enable Media Exchange's patent-pending HomeZone, which allows subscribers to access applications, manage personal preferences, and customize their communications experience—all with single-session convenience.

Media Exchange can be enhanced with additional third-party custom applications or with applications from Intervoice.

Conclusion

In a time of decreasing ARPU, wireless service providers need a comprehensive call completion strategy to ensure the optimal use

of existing infrastructure and to maximize revenues. There are a wide variety of techniques available to help increase both the number and percentage of calls completed, from both the calling party and called party direction.

A comprehensive call completion strategy should help you retain your existing customers and increase your revenue in the simplest way possible – by completing more calls.

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About Intervoice

Intervoice is a world leader in delivering natural, intuitive ways for people to interact, transact and communicate. Intervoice software and professional services enable innovative voice portal, IP contact center, hosted and mobile messaging and self-service applications. More than 5,000 customers in 80 countries have relied on Intervoice, including many of the world's leading financial and healthcare institutions, telecommunications companies, utilities, and governments. For more information, visit www.intervoice.com.

