

Answering Machine Detection with the Aspect Digital Communications Processor (DCP)

This paper describes the Aspect Answer Machine Detection (AMD) operation of the Digital Communications Processor (DCP).

Overview

AMD accuracy is a sensitive competitive issue. It is subject to a lot of extravagant, unsupported claims by all predictive dialer suppliers. The claims focus on two areas, percent of accuracy and delay, which is the time in determining whether an answering machine has answered the call.

Aspect Position

Answering Machine Detection with the DCP, when configured correctly, can have an accuracy of 90 percent, \pm five percent. Note that cell phones and the quality of the telephony network can impact this accuracy.

The Aspect method for detecting answering machines uses what's called the "cadence method," and refers to the pattern of the message left on the answering machine. It takes the DCP less than 1.5 seconds from network answer detect to determine if a call was not answered by an answering machine. In fact, many times the DCP can detect whether a person or an answering machine has answered in just 0.9 seconds after the end of the called party's 'hello'.

As soon as the DCP determines it's not an answering machine, it immediately switches the call to a live agent to maintain high service quality. Aspect goes to great lengths with its AMD algorithm to ensure that it does not disconnect a live answer that has been mistaken as an answering machine.

In addition to detecting answering machines, the DCP has the following unique features that ensure the accuracy of Answering Machine Detection:

1. Accurately identifies network intercepts (SIT Tone). Most competitive systems misidentify them as answering machines. This feature enables customers to run campaigns with AMD on and still accurately identify all bad numbers.
2. Network answering machine follows the same answer procedure as SIT intercepts. Using advanced DSP pattern recognition capabilities, the DCP can discriminate network answer machines from SIT intercepts.
3. Identifies fax and modem tones. Even if customers decide to run campaigns with AMD off, the DCP will filter out fax machines and modems from being sent to agents.

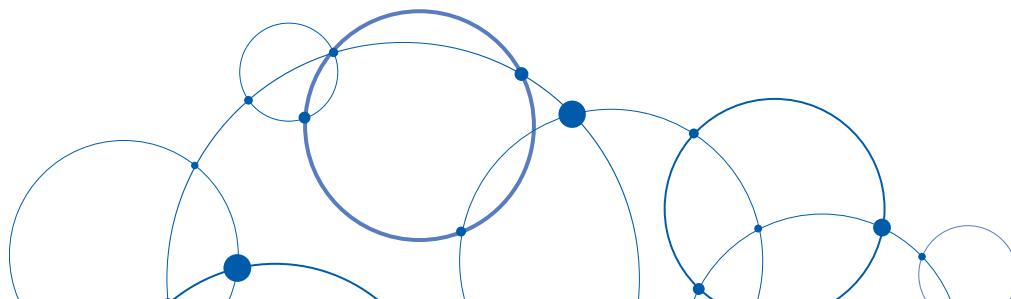
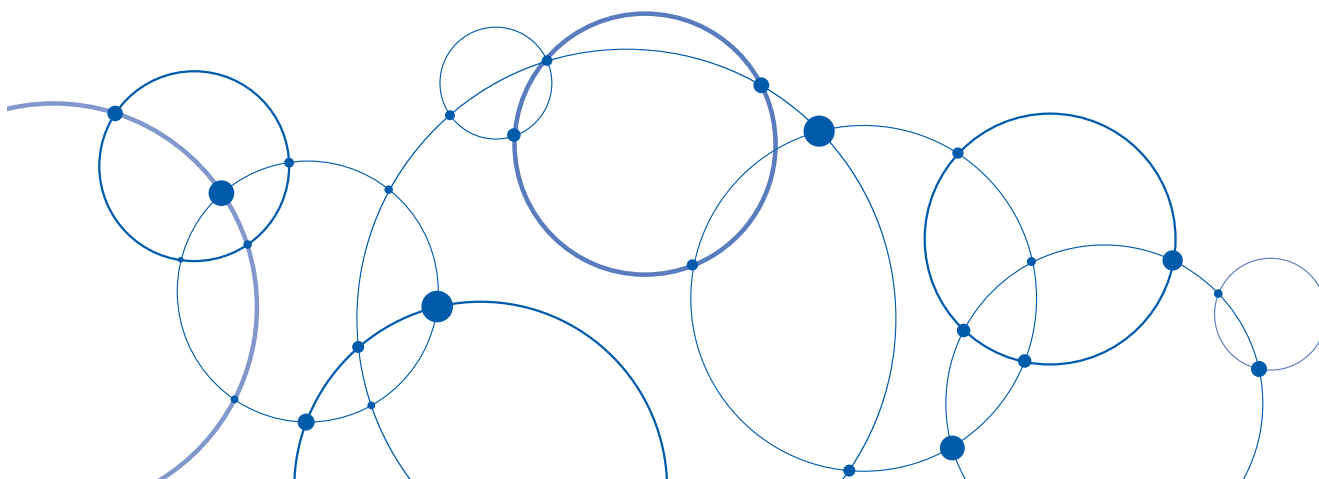


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Competitive Positioning

It is important to understand how an AMD accuracy percentage is calculated. The accuracy is determined by only using calls that are answered. The formula for determining AMD accuracy is:

$$\frac{\text{Answering machines detected by the system}}{\text{Answering machines detected by the system} + \text{calls disposition by agents as answering machines}}$$

Since agent-entered dispositions are used to determine AMD accuracy, it is important that the termination codes be properly defined and

understood by agents. There should be two distinct termination codes, one for use by agents when AMD is active and one for when it's inactive.

Some competitors in the market use all placed calls, as opposed to restricting to calls answered, as part of their calculations. Since 60+ percent of all calls are either unanswered, busy or answered calls, this calculation method would show a significantly higher accuracy percentage. If the DCP changed its method to this approach, the AMD accuracy would be in the 99+ percent range.

Another consideration is the number of live answers that are inaccurately determined to be answering machines. The DCP factors this into the accuracy rate by looking at the calls dispositioned by agents as answering machines.

Most systems only enable users to monitor the agent side of the dialer switch. Aspect solutions enable users to monitor either the trunk side or the agent side of the DCP. When monitoring the trunk side of the switch, users will hear the call being dialed, the rings and will be able to judge Answering Machine Detection accuracy. When monitoring the agent side of the switch, users will only hear calls after they have been classified and switched to an agent.

What Does a Few Percentage Points Really Mean?

The following example illustrates the value of increasing the percentage of answering machine detection performed by a contact center solution. Table 1.0 shows the cost (in terms of lost agent time) of an answering machine detection rate of 60 percent.

Table 1.0

Calls per agent hour	120
Percent of answering machines per hour	20%
Total answering machines	24
Percent of answering machines detected	60%
Answering machines handled by system	14.4
Total answering machines passed to agents	9.6
Total time per answering machine passed to agent	25
Total seconds spent per hour on answering machine	240
Number of agents	75
Burden cost per hour	\$13
Hours per day	12
Days per year	300
Total cost per year	\$234,000

Table 2.0 shows the cost (in terms of lost agent time) of an answering machine detection rate of 90 percent.

Table 2.0

Calls per agent hour	120
Percent of answering machines per hour	20%
Total answering machines	24
Percent of answering machines detected	90%
Answering machines handled by system	21.6
Total answering machines passed to agents	2.4
Total time per answering machine passed to agent	25
Total seconds spent per hour on answering machine	60
Number of agents	75
Burden cost per hour	\$13
Hours per day	12
Days per year	300
Total cost per year	\$58,500

The difference to the contact center operation in this example is more than \$175,500 per year.

What does a few percentage points really mean? In this example, for every percentage point the answering machine detection is increased, \$7,020 in lost agent productivity is recovered.

Summary

The Aspect DCP offers the most flexible, intelligent, and accurate Answering Machine Detection in the outbound business. The greater the accuracy of answering machine detection, the greater the potential for increased agent productivity.

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About Aspect

Aspect provides software and consulting services that turn the potential of unified communications into real business results across the enterprise and in the contact center. Applying 35 years of insight and experience, Aspect helps more than two-thirds of the FORTUNE Global 100, as well as small and medium enterprises, power their business processes with communications. For more information, [visit www.aspect.com](http://www.aspect.com).

