

8x8 CX Platform

AI Transcription Accuracy vs. Dialpad, & RingCentral

EXECUTIVE SUMMARY

Generating captions from the spoken word is an important element of many business functions from help centers to company meetings and more. By building this function into business audio/video platforms, vendors can add significant value. Of course, the quality of the transcription is important. Inaccurate transcriptions can hinder business functions.

8x8 commissioned Tolly to evaluate transcription accuracy of its platform and compare that to similar offerings from Dialpad, and RingCentral. Fifteen English-language samples, recorded with various accents, were used for this evaluation with each sample being evaluated four times.

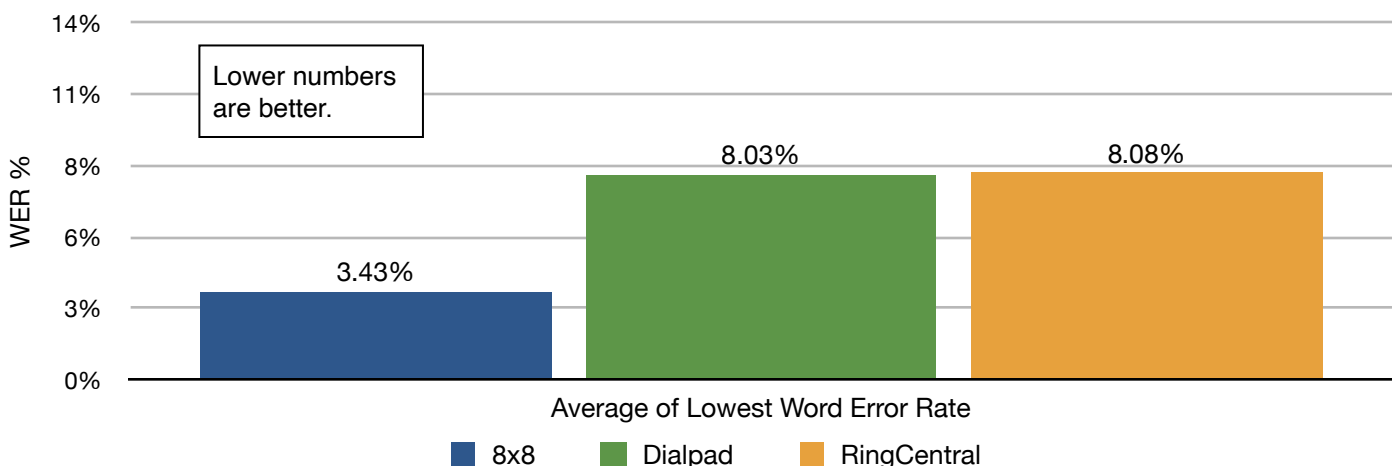
The 8x8 solution delivered the average best score across all of the samples. See Figure 1.

THE BOTTOM LINE

8x8 delivers:

- 1 Best accuracy, with lowest word error rate (WER) of 3.43 across all vendors using the best score per sample
- 2 Better accuracy than Dialpad with WER less than half
- 3 Better accuracy than RingCentral with WER less than half

AI Transcription Accuracy
Across 15 English-language Samples of Varying Accents



Note: 8x8 transcription available ~50 seconds after conversation ends. Other solutions available 1 second after word is spoken. Tests run four times, best (lowest) score used. 0% would represent perfect accuracy, 100% would represent total inaccuracy.

Source: Tolly, February 2025

Figure 1



Test Results

This was a very straightforward test. English-language audio samples were played into each solutions using an audio utility. As noted, 15 different samples were used.

It was noted that, across all of the solutions, results would vary across runs. That is to say, even though the same sample was run through the solution, the transcription would vary to some extent. That is why each test was run four times.

There was no obvious pattern to these results. In some cases, results would get worse in subsequent runs, in other cases they would get better or stay the same.

Details of samples and methodology can be found in Table 1 and in the Test Setup & Methodology section later in this report.

Best Case Average Accuracy

The single set of results could be analyzed in several different ways. Figure 1 illustrates a summary of the best results for each vendor across all samples. To calculate this result, the best (lowest) score was taken for each sample and averaged.

8x8 had the best average score of 3.43 meaning that, on average, 3.43% of the words were transcribed inaccurately. The results for Dialpad and RingCentral were similar to each other at 8.03% and 8.13% respectively. Again, see Figure 1.

Average Accuracy

Table 2, on the following page, lists the average results of four runs on a sample-by-sample basis.

Across the samples, it was evident that the accent of the speaker impacted the results and that some solutions were more accurate with certain accents than other solutions.

In particular, Scottish and Welsh accents seemed to be the most challenging for the solutions to transcribe accurately.

Here, again, 8x8 delivered better average results than the other two solutions. 8x8 had the best (lowest) percentage with an average of 4.54%. Dialpad and RingCentral had average results of 8.53% and 9.20% respectively.

Test Setup & Methodology

Solutions Under Test

Current (mid-February 2025) versions of solutions from 8x8, Dialpad, and RingCentral, that supported transcription were used for the testing.

Test Files - Text-to-Speech

The conversation content of the test files generally focused on the type of discussions that would be had between a customer and support staff of any number of products or services. The Narakeet text-to-speech program was used to generate the mp3 audio files used for this testing. Table 1 lists additional details about the content. Each audio file was between three and seven minutes in length. At least two speakers were used in all but one case, which utilized three speakers. All audio was generated in the English language. The different accents are listed in the table.

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8x8 CX Platform

AI Transcription
Accuracy



*Tested
February
2025*

Test Tool - Loopback

In order to test each solution, the Loopback utility from Rogue Amoeba Software was used to create a virtual input. This virtual input would route the output of the audio file playing back on QuickTime (or any suitable audio player) into the microphone input of the solution under test. The test conversations were played back as mono rather than stereo.

Procedure

A session was established between the solution under test and a conversation partner (phone, video). That partner was not active in the test.

Transcription was enabled for the solution under test. Samples were played back sequentially and transcribed. At the end of the test, the transcribed test was saved in text file format. Each sample was run four times through each solution as testers noticed that the results could vary for each run. Presumably, as more samples would be run, the scores would stabilize and perhaps improve.

After extraneous lines were removed, the file was analyzed by a Python program. This



program was built around the open-source jitsi/jiwer module used to evaluate speech-to-text systems. That source code can be found on GitHub at: <https://github.com/jitsi/jiwer>.

Word Error Rate (WER)

WER is a metric used by many vendors of speech recognition solutions. The calculation factors in how many substitutions, deletions, insertions are found in the transcript to develop an overall score for accuracy.

While the WER is noted as being between 0 and 1, the WER was multiplied by 100 to turn it into a percentage for this report.

More information on WER can be found at: https://en.wikipedia.org/wiki/Word_error_rate..

AI Transcription Accuracy WER Percentage
Average Results Across Four Test Runs Per Sample
(Lower Scores Are Better)

| Sample # | Topic | Speaker One Accent | Speaker Two Accent | 8x8 | Dialpad | RingCentral |
|----------|--|--------------------|----------------------|-------|---------|-------------|
| 1 | Billing and Payment Issues | British | American | 2.83 | 2.11 | 5.45 |
| 2 | Technical Support | British | Scottish | 10.18 | 24.46 | 25.45 |
| 3 | Account Management | Welsh | Scottish | 5.18 | 14.70 | 17.94 |
| 4 | Order Status and Tracking | British | Australian | 3.46 | 2.29 | 2.34 |
| 5 | Product or Service Information | Indian | Filipino | 3.19 | 7.85 | 5.94 |
| 6 | Returns, Exchanges, and Refunds | British | Canadian | 3.38 | 3.93 | 5.21 |
| 7 | Service Activation or Cancellation | American | American | 2.52 | 1.28 | 3.21 |
| 8 | Complaints and Escalations | New Zealand | Irish (and American) | 7.07 | 3.67 | 4.49 |
| 9 | Renewals and Upgrades | Irish | Australian | 4.03 | 5.68 | 5.40 |
| 10 | Warranty and Repair Requests | Indian | Scottish | 6.65 | 9.57 | 7.82 |
| 11 | Loyalty Program or Rewards | New Zealand | Welsh | 5.44 | 22.05 | 22.88 |
| 12 | Outage or Service Disruption Updates | Canadian | Scottish | 2.35 | 10.61 | 8.82 |
| 13 | Pricing and Discounts | Australian | Welsh | 3.11 | 8.77 | 12.29 |
| 14 | Dispute Resolution | Indian | New Zealand | 2.82 | 3.80 | 5.33 |
| 15 | Appointment Scheduling or Rescheduling | Nigerian | African | 5.86 | 7.12 | 5.38 |
| | Average Result | | | 4.54 | 8.53 | 9.20 |

Note: 8x8 transcriptions available ~50 seconds after the end of the call, others available within ~1 second of words being spoken.

Source: Tolly, February 2025

Table 1



About Tolly

The Tolly Group companies have been delivering world-class IT services for more than 35 years. Tolly is a leading global provider of third-party validation services for vendors of IT products, components and services.

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