

CSG Assure GCS

2025



CSG
Jing Wu, Client
Solution Assure

CSG Overview



CSG's technologies and people have helped some of the world's most recognizable brands solve their toughest business challenges and evolve to meet the demands of today's digital economy with future-ready solutions that drive exceptional customer experiences.

40+
Years of
Experience

900+
Clients Worldwide

120+
Countries Served

6,000+
Employees

\$1.09B+
Revenue



Customer Experience

- Customer Journey Orchestration & Analytics
- Customer Data Management
- Customer Engagement Channels
- Experience Consulting & Design
- Pre-Built, Industry Specific+ Customer Journeys
- Pre-Configured Integrations



Revenue Management & Digital Monetization

- Unified Product Catalog, CPQ, Order Management and Orchestration
- Mediation/Settlements
- Convergent Rating, Billing and Charging
- Digital BSS/marketplace
- Print Design, Composition, and Delivery
- Wholesale and Partner Management



Payment Services

- ACH Payments
- Credit Card Processing
- POS and Mobile Payments
- Payment Gateways
- Merchant Onboarding & Management Platform

12.3B
Journey
Interactions

2.2B
Customer
Communications

110
Customers
Worldwide

\$100B
Annual Payments
Processed

900M+
Wireless
Subscribers
Supported

500M+
Daily Charging
Transactions

\$98B+
Annual Payments
Processed

98k Merchants in
North America

168M
Payments
Transactions

COMMUNICATIONS | MEDIA AND ENTERTAINMENT | GOVERNMENT | FINANCIAL | HEALTH | UTILITIES | RETAIL | HIGH TECH

Challenges in Interconnect Voice

- Migration to IP-Based Interconnects (VoIP, VoLTE, IMS)
 - Interworking between TDM and IP can degrade voice quality (e.g., jitter, latency, packet loss)
- Fraud and Robocalling
 - Interconnect points are major fraud targets (e.g., CLI spoofing, call hijacking, bypass fraud)
- Regulatory and Commercial Complexity
 - Interconnect agreements are bound by varying local regulations, especially around termination rate, data retention
- Quality of Service (QoS) Management
 - Packet-based voice is sensitive to network congestion, unlike legacy TDM

Fraud and Robocalling

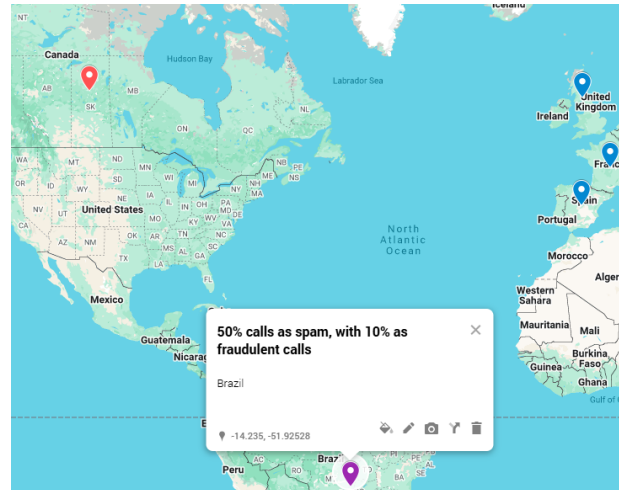
Customer Experience = Brand Reputation



Approximately **2,700 robocalls** are made every second globally, equating to over **230 million robocalls per day**

\$76 billion

Globally, users are expected to lose over **\$76 billion in 2025** to fraudulent robocalls (per Juniper Research)



Canada: Consumers receive an average of **4 to 5 spam calls per month**, constituting about **20%** of all calls made in the country

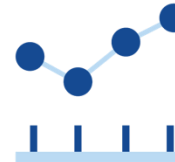
Countries like Spain, the United Kingdom, Italy, and France report high percentages of phone spam, ranging from **20% to 24%**



Do you understand the quality of your service

- Can it be *reached* all the time?
- Any fraud activities involved?

- ☐ Robot Calling
- ☐ Wangiri
- ☐ FAS, SIM Box, CLI Spoofing



Do you have a 24/7 proactive monitoring on your services and a clear visibility?



Is there an automatic alert on issue detected?

CSG Assure – Active Testing Platform

How can active testing help



Migration

Simulates **real calls**
between different
network types (e.g.,
VoLTE-to-VoLTE, VoIP-to-
TDM) to verify call setup,
codec negotiation, and
signaling MOS



Fraud Detection and Robocalling

SIM Box Detection
CLI Spoofing
Domestic Bypass Detection
Suspicious Frand Number
Verification
A2P/P2P SMS Fraud



Commercial Compliance

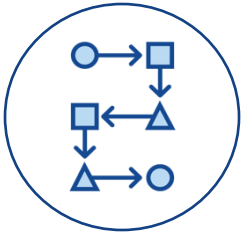
Validates that commercial
routes match **the agreed**
rates and paths.



QoS Management

End-to-end voice quality
monitoring using MOS (Mean
Opinion Score), jitter, latency,
and packet loss measurements.
Proactive and auto alerting

A Single Platform for Various Fraud Detection



Robot/Wangiri

Dial-back testing
IVR speech-to-text
Test number uploads
Automated checks



SIM Box/CLI Spoofing

SIM box detection
CLI spoofing validation
Routing cleanup
Ad-hoc & Automated



A2P & P2P SMS

Gray route detection
Supplier benchmarking
GT bypass alerts

One Platform. Endless Potential.

Our Test Network Coverage

How we are different from competition

170 countries 580 networks

92 countries



Largest Mobile & Fixed network available in the market

Ad-hoc Testing – Robo Calling Verification

CSG Assure

Contact Center Test X

Home

Dashboard

Analysis

Report

TESTS

Test Roaming

Test Contact Center

Test Sets

Task Schedule

Test History

Numbers

SYSTEM

Node Status

01 NUMBER SELECTION

Select who do you want to call.

Set parameters

CUSTOMER Customer

COUNTRY Country

NUMBER Select customer and/or country first

GROUP

TYPE

02 TEST

Choose the test you want to run.

Select test

Customer Generic

Search for test

Standard - Connectivity Test

Google - Call Quality Test

Apple - Call Quality Test

BMW - Call Quality Test

Standard - Call Quality Test

03 FROM

Choose where you want to call from.

Set parameters

Default origination

Custom

COUNTRY Same as target numbers

NETWORK

TYPE

TEST SET

Add a title

Add to test

Add from test sets

NO OF EXECUTIONS 1

Schedule

Run test

CUSTOMER	COUNTRY	NUMBER	TEST	FROM	RESOLVED ITEMS
CUSTOMER	COUNTRY	ALL NUMBERS	TEST NAME	FROM	00

Rapid Result Verification

TEST SET

Add a title

Edit test set

NO OF EXECUTIONS 1

Schedule

Re-run test

STATUS

RESULT

CUSTOMER

COUNTRY

NUMBER

TEST

FROM

RESOLVED ITEMS

Successful

Valid

CUSTOMER

COUNTRY

ALL NUMBERS

TEST NAME

FROM

00

STATUS

RESULT

LABEL

LABEL

Successful

ASR (ANSWERED)

RINGING DELAY

ANSWER DELAY

MOS (VOICE QUALITY)

PHONE NUMBER

TEST NODE

DATE

START

DURATION

+49 30 901 820

Germany - Vodafone - Test Node (467094)

3 Nov 2022

8:58:40

19 seconds

Measures

CALL TAG

CALLING NAME

CALLING NETWORK

PHONE NUMBER

RINGING DELAY

ANSWER DELAY

CALL START

RINGING

RELEASE CAUSE

Beta 1 IVR call

Test Node (467094)

Germany - Vodafone

+49 30 901 820

2.44

2.60

08:58:42

08:58:45

Normal call clear

Trace

Steps

STEP

DESCRIPTION

EXPECT TO HEAR

TRANSCRIPTION

REPLY WITH

DETAILED RESULT

1

Menu 1

Hello, I can answer questions about your internet plan, like, replacing a modem or transferring of cancelling a plan. What can I help with today? {(*)} {BargeIn}

Transcription

—

Successful

MATCHED WITH CONFIDENCE

96,4%

RESPONSE TIME

1.20

DURATION

10.09

1

Menu 1

Hello, I can answer questions about your internet plan, like, replacing a modem or transferring of cancelling a plan. What can I help with today? {(*)} {BargeIn}

Transcription

—

Successful

MATCHED WITH CONFIDENCE

96,4%

RESPONSE TIME

1.20

DURATION

10.09

Test Numbers Management

CCT / Numbers

CUSTOMER

ABC Solutions

COUNTRY

Search

Quick filter

CUSTOMER	COUNTRY	IVR	PHONE NUMBER	PHONE NUMBER TYPE	PHONE NUMBER GROUP
ABC Solutions	UNITED KINGDOM	ABC Solutions - Voice - Sales - Pr...	+44 808 189 9350	ITFS	Voice prompt
ABC Solutions	UNITED KINGDOM	ABC Solutions - Voice - Sales - Pr...	+44 20 3830 0696	DID	Voice prompt
ABC Solutions	FINLAND	ABC Solutions - Voice - Sales - Pr...	+358 800 413694	ITFS	Voice prompt
ABC Solutions	GREECE	ABC Solutions - Voice - Sales - Pr...	+30 800 848 1488	ITFS	Voice prompt
ABC Solutions	CANADA	ABC Solutions - Voice - Sales - Pr...	+1 418-478-4170	DID	Voice prompt
ABC Solutions	SWEDEN	ABC Solutions - DTMF - Support ...	+46 20 160 46 49	ITFS	Touch tone
ABC Solutions	IRELAND	ABC Solutions - DTMF - Support ...	+353 1800 817 928	ITFS	Touch tone
ABC Solutions	SPAIN	ABC Solutions - DTMF - Support ...	+34 900 958 088	DID	Touch tone
ABC Solutions	UNITED STATES	ABC Solutions - DTMF - Support ...	+1 833-932-4881	ITFS	Touch tone
ABC Solutions	UNITED STATES	ABC Solutions - DTMF - Support ...	+1 225-484-5885	DID	Touch tone

Schedules

+ Create Test Set

Quick filter

Row

TEST SET NAME	DESCRIPTION	CUSTOMER	IS SCHEDULED	MODIFIED
ABC - Voice		ABC Solutions		2024-01-11 14:49:43
ABC - DTMF		ABC Solutions		2024-01-11 14:47:11

No records available.

SCHEDULE TEST SET

Define when the scheduled test set will run

Recurring One-time

1 Schedule Test Set

2 Frequency

3 Daily Frequency

4 Duration

Cancel

Save

Automatic Testing

Test

Test Results

Analytics

Test Set

Schedule

Test History

Numbers

Roaming

Test

Test Results

Analytics

Test Set

Schedule

Test History

1 CALLED PARTY SELECTION
Select numbers to call

Set Parameters

CUSTOMER

ABC Solutions

COUNTRY

CANADA FINLAND GREECE IRELAND SPAIN SWEDEN UNITED KINGDOM UNITED STATES

GROUP

All

TYPE

All

NUMBER

All

Clear selection

Add to Test

Remove all tests

Run Test

2 TEST SELECTION
Select test to run

Select Test

Navigation & VQ

Call an IVR, connect, navigate with touch tones (DTMF) to reach an IVR node. Listen to the message, calculate the MOS (reference) and capture the audio. Verifies that the call is connected, the navigation works and that the voice quality is ok. Only IVR numbers configured in Assure can be called.

Connectivity Basic

Call a number and hang up at connect. Verifies that the call is connected but does not verify that the right called party is reached. Any number can be called.

Connectivity Full

Call a number, connect and listen to the greeting message, calculate the MOS (non-reference) and capture the audio. Verifies that the call is connected and lets the user listen to the audio to verify that the right calling party is reached and that the audio is ok. Any number can be called.

3 CALLING PARTY SELECTION
Select party to call from

Set Parameters

INTERNATIONAL TESTING

☐

CALLING PARTY TYPE

All

CALLING PARTY

Default

Quick filter

Rows: 8

Customer	Country	Group	Type	Number	IVR Name	Test	Calling Party Type	Calling Party	Script Parameters
ABC Solutions	CANADA	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	FINLAND	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	GREECE	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	IRELAND	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	SPAIN	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	SWEDEN	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	UNITED KINGDOM	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...
ABC Solutions	UNITED STATES	All	All	All		Connectivity Full	All	Default	MOS Score Threshold=2, Answ...

Automatic Testing

CSG Assure

< Selection view

CCT / Test

Jing Wu

Assure Demo

CCT

Test

Test Results

Analytics

Test Set

Schedule

Test History

Numbers

Roaming

Test

Test Results

Analytics

Test Set

Schedule

Test History

Selected Tests

	Status	Result	Customer	Country	Group	Type	Number	Test	Calling Party Type	Calling Party	Total Calls	Successful Calls	Failed Calls	Other
✓	Successful	Number of Successf...	ABC Solutions	CANADA	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	FINLAND	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	GREECE	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	IRELAND	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	SPAIN	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	SWEDEN	All	All		Connectivity Full	All	Any	1	1	0	
✓	Successful	Number of Successf...	ABC Solutions	UNITED KINGDOM	All	All		Connectivity Full	All	Any	2	2	0	
✗	Failed	Number of Successf...	ABC Solutions	UNITED STATES	All	All		Connectivity Full	All	Any	2	1	1	

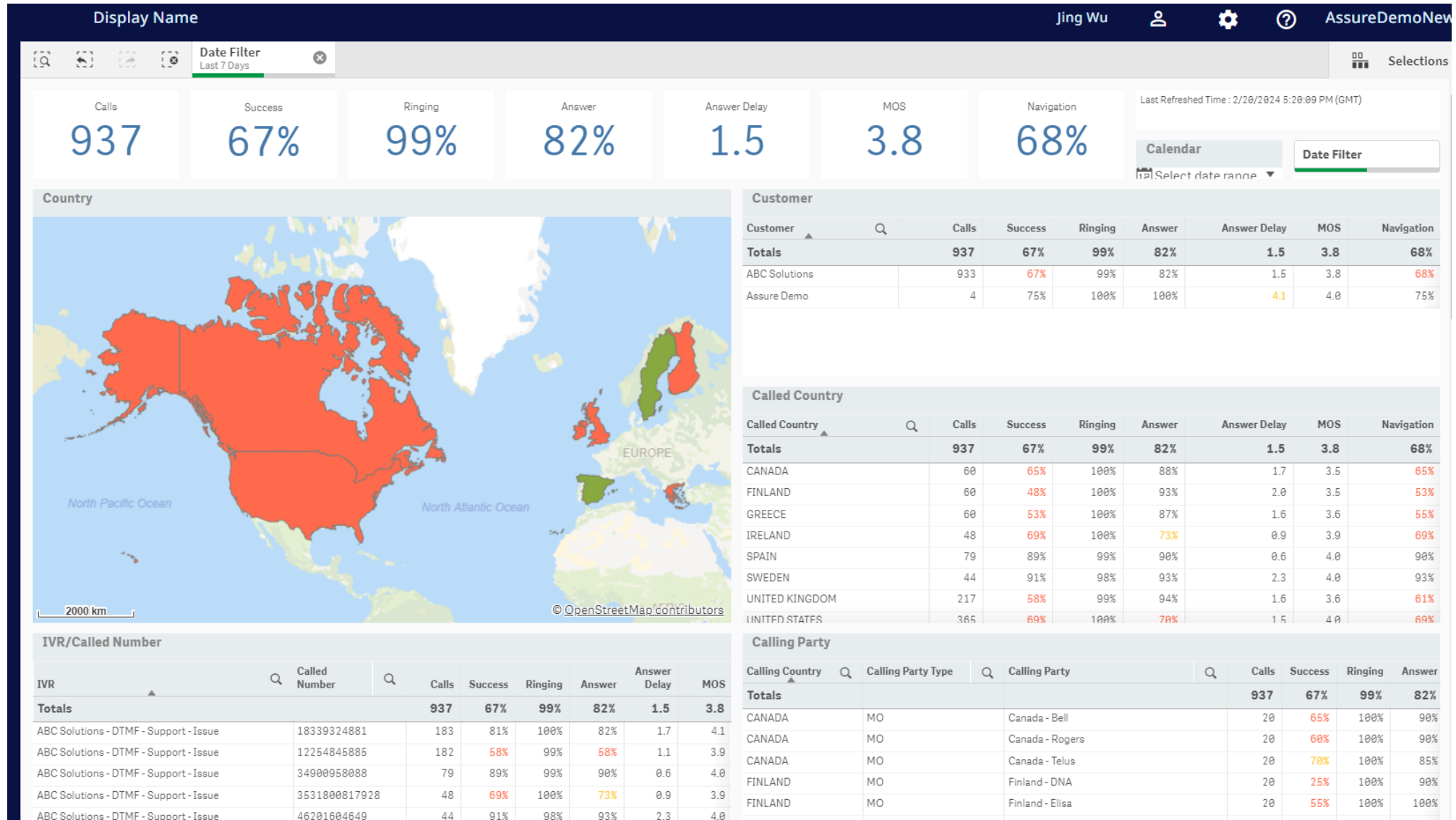
Test calls

	Status	Result	Ringing	Answer	Answer delay	MOS	Navigation	Call Duration	Min MOS	Last Node Reached	Calling Party	Called Number	IVR Name	Ringing Delay	Answer Delay
✓	Successful		✓	✓	✓	✓		10.2	4.7		1 DTAG	14184784170	ABC Solutions - Voice...	2.2	2.3
✓	Successful		✓	✓	✓	✓		10.1	4.6		1 DTAG	358800413694	ABC Solutions - Voice...	1.2	1.5
✓	Successful		✓	✓	✓	✓		10.4	4.1		1 Greece - Vodafone	308008481488	ABC Solutions - Voice...	0.8	1.2
✓	Successful		✓	✓	✓	✓		10.5	4.1		1 Ireland - Vodafone	3531800817928	ABC Solutions - DTM...	0.8	1.1
✓	Successful		✓	✓	✓	✓		10.1	3.9		1 BEL/BICS (QUA)	34900958088	ABC Solutions - DTM...	1.3	2.4
✓	Successful		✓	✓	✓	✓		10.6	4.1		1 Sweden - Telenor	46201604649	ABC Solutions - DTM...	1.6	1.7
✓	Successful		✓	✓	✓	✓		10.5	4.4		1 UK (Surrey) - O2	442038300696	ABC Solutions - Voice...	0.9	1.7
✓	Successful		✓	✓	✓	✓		10.2	4.6		1 DTAG	448081899350	ABC Solutions - Voice...	1.8	2.3
✗	Failed	No Ringing, No An...	✗	✗	✗	✗	✗				VSNL	12254845885	ABC Solutions - DTM...		
✓	Successful		✓	✓	✓	✓		10.4	4.1		1 USA (Atlanta) - T-Mo...	18339324881	ABC Solutions - DTM...	0	1.2

Call Steps Call Trace

Step	IVR Node	Step Duration	MOS	MOS Method	Expected audio	Expected audio transcript	Actual audio	Actual audio transcript	Transcript Error Rate	Input Type	Input
0	Connect	1.2					☎				20/05
1	Full Connectivity	10		4.1 Non-reference			☎	Welcome to ABC solutions, your trus...	2700 %		20/05

Integrated Dashboards





Thank you!

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