Software Requirements Specification (SRS)

Project Name: TCall Website, Client & Admin Dashboard
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1. Introduction

1.1 Purpose

This document outlines the complete software requirements for the TCall system, which includes:

- **Public-facing Website**

- **Client Dashboard (after login)**

- **Admin Dashboard**

It is intended for stakeholders, developers, testers, designers, and product managers involved in the development and maintenance of the platform.

1.2 Scope

TCall is a SaaS platform that provides AI-powered voice agents to automate customer support and sales communication. The platform supports both **inbound and outbound calls**, **agent management**, **campaign creation**, and **call tracking**, with integrations to services like **Twilio**, **Retell AI**, and **ElevenLabs**.

The solution includes:

- An interactive **website** for lead acquisition, trial calls, and onboarding.

- A **client dashboard** to manage AI agents, campaigns, contacts, calls, and subscriptions.

- An **admin dashboard** for full platform oversight, including user approval, phone number assignment, and statistics.

1.3 Definitions, Acronyms, and Abbreviations

Term	Definition
AI Agent	Virtual voice agent powered by ElevenLabs/Retell
Inbound Call	Call initiated by a customer to a business
Outbound Call	Call initiated by the system to a customer
RAG	Retrieval-Augmented Generation (not applicable here)
JWT	JSON Web Token – used for authentication

1.4 References

- [PRD Document – TCall Website & Dashboards](#)

- Twilio, Retell, and ElevenLabs API Documentation

- Django Admin Documentation

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2. Overall Description

2.1 Product Perspective

The TCall system is a modular SaaS product deployed in the cloud. It consists of:

- **Frontend:** React-based public website and dashboards

- **Backend:** Django-based API server and admin panel

- **Storage:** PostgreSQL for relational data, S3 for recordings

- **Telephony:** Third-party APIs (Twilio, Retell, ElevenLabs)

2.2 Product Functions

- AI agent creation and management

- Campaign management for batch calls

- Real-time trial AI calls from the website

- Contact and group management

- Subscription and billing view for clients

- Admin features like revenue tracking, user approval, and voice configuration

2.3 User Characteristics

User Type	Skills Needed
Visitor	Basic internet usage
Client	Moderate tech literacy
Admin	Advanced platform knowledge, Django familiarity

2.4 Assumptions and Dependencies

- Phone numbers requiring regulatory approval must be manually added by Admin.

- External APIs are operational (Twilio, ElevenLabs).

- Admin panel runs on Django; voice/prompt assets are pre-configured.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Website

- Users can:

- ○ Navigate to sections: AI Customer Support, AI Sales Support, About, Pricing, FAQ

- ○ Register/Login

- ○ Click "Get Started" to begin onboarding

- ○ Use "Speak with an AI Agent" trial by entering name, number, and selecting an agent

- ○ Receive outbound trial call

3.1.2 Client Dashboard

- View Dashboard Overview: Credits, agents, numbers, business info

- Manage AI Agents:

  - ○ Create, edit, assign prompts and languages

- Manage Calls:

  - ○ Make outbound calls manually

  - ○ Create and schedule campaigns

  - ○ View call logs, download audio/transcripts

- Contact Management:

  - ○ Add/edit contacts and groups

  - ○ Import via Excel

- Subscription & Billing:

  - ○ View plan and payment info

- Profile Settings:

  - ○ Update personal info

  - ○ Change password

○ Logout

3.1.3 Admin Dashboard

- View Platform Stats:

  ○ Revenue, call duration, usage costs, profit

- Manage Users:

  ○ View business details

  ○ Approve/reject based on AI agent and number assignment

- Phone Number Management:

  ○ Buy or register numbers

  ○ Assign to clients or agents

- AI Agent Management:

  ○ Create and update inbound/outbound agents

  ○ Assign voice, language, prompt

- Campaign Management:

  ○ View and manage all campaigns

- Contact Module:

  ○ Create/import contacts/groups

  ○ Manual calling

- Call Logs:

  ○ Search, filter, export logs

  ○ Download audio and transcripts

3.2 Non-Functional Requirements

Category	Requirement
Performance	Response time < 500ms for dashboard and website UI
Scalability	Support 1000+ concurrent users, multi-agent calls
Security	JWT-based auth, secure role-based access
Availability	99.9% uptime, failover for critical services
Usability	Mobile-friendly UI, accessible design
Maintainability	Clear modular codebase, API documentation
Portability	Docker-based deployment across environments

3.3 External Interface Requirements

Interface	Description
Twilio API	For call routing, phone number management
Retell API	For AI outbound agent integration
ElevenLabs API	For inbound AI agent voice
Django Admin	For internal admin configurations and overrides
S3 Storage	For storing audio recordings and logs

4. System Features

Feature	Description	Priority
Agent Trial Call (Website)	Call initiated after form submission on homepage	High
Dashboard Navigation	Easy sidebar and top-menu access to key features	High
AI Agent Creation	Assign voice, prompt, and type	High
Feature	Description	Priority
Campaign Scheduling	Batch call execution based on contact group	High
Audio & Transcript Logging	Access to call history and exportable logs	High
Admin Revenue Dashboard	View usage, revenue, and cost metrics	Medium

5. Performance Requirements

- Dashboard load time: < 2s

- API call response time: < 500ms for basic operations

- Concurrent campaigns: 1000+

- Recording playback delay: < 1s after click

6. Design Constraints

- Regulated phone numbers are not handled via the web interface.

- Agent voices and prompts must be pre-configured in Django.

- External APIs may have usage or rate limitations.

7. Quality Attributes

- **Reliability:** Consistent AI call handling and prompt execution

- **Maintainability:** Modular components for quick updates

- **Security:** Role-based permissions and data encryption

- **Testability:** Clear workflows allow unit and integration testing

8. Appendix

- PRD Document Reference

- Admin Voice Prompt List (Django Admin)

- Sample Excel for Bulk Upload