

Case Study: Transforming a Legacy Dialer Company into a Modern Hosted VoIP Provider

Overview

A long-standing dialer company, previously dependent on copper-based infrastructure and hardware dialers, was struggling with high maintenance costs, limited scalability, and outdated capabilities. Our team was brought in to modernize their entire system—transitioning them from legacy copper dialers to a hosted VoIP architecture. This included building a custom desktop client in C++, using FreeSWITCH and Kamailio for the telecom core, and integrating with FusionPBX for system management and dashboarding.

The result was a flexible, scalable, and secure solution that enabled rapid onboarding, remote work, and enhanced communication capabilities—all while reducing operating costs and improving uptime.

Client Profile

- **Industry:** Outbound Telephony / Call Center
 - **Company Size:** 50+ agents
 - **Legacy System:** Copper-based dialers with a Vax VoIP SDK
 - **Primary Issues:**
 - Expensive, hardware-bound deployment
 - No remote capabilities
 - No integration with CRM or texting systems
 - Frequent hardware failures
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Goals

-  Enable remote agent access
-  Eliminate reliance on physical dialer hardware
-  Reduce cost of call handling
-  Integrate with CRM and lead tracking tools

-  Add SMS/texting capabilities
 -  Improve uptime and system reliability
 -  Ensure compliance (TCPA, HIPAA)
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Technical Solution

Backend Architecture:

- **Kamailio** for SIP registration and presence
- **Two FreeSWITCH servers** for call processing, media handling, and load balancing
- **AWS Route 53** for DNS-based failover and traffic management between the FreeSWITCH servers
- **FusionPBX** as the management layer for provisioning, call logs, dashboards, and multi-tenant control

Client Side:

- **Custom-built desktop application in C++** using the Vax VoIP SDK for call routing, softphone functions, and live status indicators

Features Implemented:

- CRM Integration via RESTful APIs
 - SMS/MMS support for outbound/inbound communication
 - Real-time monitoring and analytics via FusionPBX dashboards
 - VPN-secured remote login for agents
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Results

- **40% Increase in active call volume** — driven by the ability to quickly deploy new agent desktops
- **Zero hardware delay** — no more waiting for physical dialers to ship
- **Remote-first capability** — agents could now work from anywhere
- **Streamlined operations** — easier maintenance and live metrics for supervisors

Client Feedback

"Tim is a telephony genius. I hired a local Dallas-based company to install my PBX... they were rude and hard to reach. Tim came in, fixed everything within an hour, and clearly knows his craft. Highly recommended." — *Jeremiah Mosher*, Creative Director at McCall and Lee

"Tim has helped us develop a VoIP business and is an important part of our company today. We'll be using Tim ongoing." — *Rolly Taber*, Partner at Electronic Voice Services

"Tim helped us create a new VoIP service that's unique in the industry. He's always available by phone, email, or chat, and he's easy to work with." — *Richard Hardgrave*, President at Electronic Voice Services

"Truthfully, the best experience with any IT Director I've ever had! Tim, you rock." — *Zachary Meyer*, Telecommunications Specialist