**UNIFIED COMMUNICATIONS AS A SERVICE (UCAAS)**

Any organization that requires secure use of global voice and text communications will be successful with Tirade. Perfecta Tirade is a secure Unified Communications as a Service (UCaaS) solution utilizing state-of-the-art VoIP technology allowing use of a web browser to send and receive MMS, SMS, and voice calls while employing locally projected phone numbers that are provisioned from around the world.

READ THIS WHITEPAPER TO LEARN:

- 01**
How global telecommunications are changing
- 02**
How voice and messaging can be utilized as a service not requiring a local infrastructure
- 03**
Learn Perfecta Tirade's features for securing global communications for clients
- 04**
Integrating into a managed attribution network and persona driven operations for security and threat management

**Tirade**an advanced, secure communications solution
for global organizations

VoIP technology has become the de facto protocol.

A secure communications strategy build around services that advance your capabilities.



INTRODUCTION

AN EVER EVOLVING COMMUNICATIONS INFRASTRUCTURE

Global telecommunications capabilities are continually changing and expanding as more IP networks are established, as internet bandwidths increases, and as the quality of services improves. With increased availability of high-speed Internet and advanced wireless services (ex. 4G, 5G), new features and international connectivity become more accessible and affordable to organizations of any size.



Businesses can now configure their telecommunications solutions to incorporate both traditional Private Branch eXchange (PBX) features and/or Cloud Service Providers (CSPs) features including support for high definition voice calls, fax over IP, voicemail, text messaging, email, and web conferencing. CSPs offer network services, infrastructure, and/or business applications by hosting services in a data center that can be accessed by companies or individuals using either fixed or wireless network connectivity. Now, CSPs typically offer their products as software-as-a-service (SaaS), reducing the need for and associated expenses of on-premise telecommunications systems, including hardware, maintenance and monitoring. Leveraging the cloud, multiple instances of communications applications can run simultaneously, providing the utmost reliability through application redundancy.

Companies are also recognizing the value of incorporating text messaging in the form of multimedia messaging service (MMS) and short message service (SMS) into their communications strategies. While voice calls may go unheard and emails remain unopened, research indicates that most text messages are read within three minutes of their delivery. Text messages with or without interactive content (pictures, videos, etc.) can be sent or received around the world, tracked and managed through delivery platforms, scheduled for delivery, and can be personalized based on recipients' characteristics, such as their location.

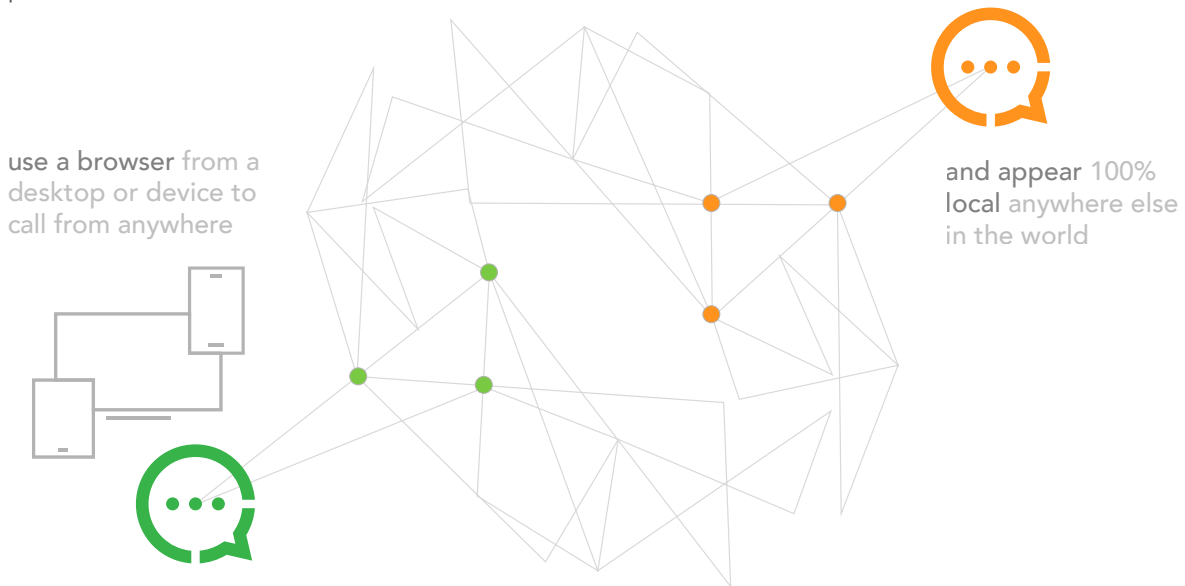
Over the last decade Voice over IP (VoIP) technology has achieved a high maturity level to become the de facto communications technology of choice for enterprise communications. VoIP transmits voice as IP data packets anywhere in the world where Internet connections are available. By using VoIP to route long distance and international calls, more information can be transmitted over the IP network at lower cost, resulting in substantial savings for telecommunications budgets. These advances in telecommunications technology enable small businesses to lease high-tech communications solutions that **level the playing field with larger competitors.**



TIRADE

SECURE UNIFIED COMMUNICATIONS AS A SERVICE

Perfecta Tirade is a secure Unified Communications as a Service (UCaaS) solution utilizing the next generation VoIP. It allows using a web browser on a mobile or desktop device to send and receive MMS, SMS, files, pictures, audio clips, videos and voice calls while employing locally projected phone numbers that are provisioned from around the world. **Tirade can be accessed with a web browser from a mobile or desktop and can send files, pictures, audio clips and videos along with messaging and phone calls.** Tirade provides exceptional call quality, utilizing integrated 4G mobile wireless gateways and global telecom providers and operates on a secure, robust virtual private network (VPN) infrastructure.



Any organization that requires secure use of global voice and text communications will find Tirade an attractive option, including organizations with B2B, B2C business models and government organizations.



For example, local and state police departments can utilize Tirade's integrated customer relationship management (CRM) tool and voice system to manage confidential informants and tip lines.



For election campaigns, Tirade's secure interactive voice and text system allows campaigns to send and receive messages to selected recipients from a local phone number.



For National Guard and emergency response organizations, early warning messages can be sent to specific recipients with instructions for protective measures or directives for evacuation procedures.

TIRADE

VOICE - MESSAGING - CONFERENCING

This is done by masquerading IP addresses, modifying network signatures, and altering the appearance of language packs, browsers, and operating systems for our customers. In addition, Labyrinth alters the purpose of traffic generated from the end user's system by **blending it with other traffic** coming from the same system.

VOICE OVER IP (VoIP)

Through the use of advanced call routing technologies, Tirade utilizes secure, double-encrypted voice over IP (VoIP) to send and receive voice calls over the Internet without the need for traditional telephones or insecure circuit-switched transmission. VoIP sends voice data as data packets over an IP using VPN i.e. encrypted tunnel (e.g. Labyrinth) allowing callers to speak and listen as if they were talking over traditional phone connections.



Perfecta VoIP also has several advantages over conventional telephony. It utilizes the latest VoIP technologies to ensure optimum call quality over varied networks conditions and to make communications truly secure (ex. WebRTC). Incoming calls can be easily routed to our browser based VoIP endpoint. No matter where the Tirade user is physically located, a software-based phone coupled with a headset equipped with a microphone will connect to any endpoint with an internet connection anywhere in the world.



MESSAGING

With Tirade, users can send and receive MMS and SMS messages specific to your communications strategies. Text messages sent to recipients across the world can include pictures, videos, etc., tracked and managed through delivery platforms, scheduled for delivery, and can be personalized based on recipients' characteristics, such as their location.

CONFERENCING

Tirade users can provision a conference call that is accessible via PSTN by dialing a standard phone number and joining in with or without a security PIN, with or without a dial-in whitelist. Tirade conferencing supports video calls through Facetime, Zoom, Skype, and Tandberg. Conferences can be recorded and automatically transcribed (in English) with the audio attributed to the phone number with the print out reading like a screen.

Soon, emotion metrics will be available based on audio tonality and, when available, facial analysis of video conferencing. When the resolution is available, emotional metrics from conference room participants and audio/text separation in transcription is possible.



TIRADE

AUTOMATED WORKFLOW - VOICE AND FACIAL IDENTIFICATION

AUTOMATED WORKFLOW

Tirade's automated workflow recommends optimal methods for sending and receiving messages based on cost and connectivity options. The automated workflow also routes inbound calls to appropriate call center staff or to a region-specific voice mail. Tirade can utilize keywords for routing decisions, or you can assign chat bots to inbound phone numbers for responding to message recipients with predetermined scripts.

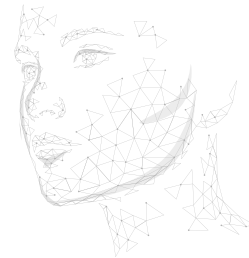


Voice mails can be converted to MP3 files with metadata (encrypted or not) for download and distribution to the appropriate staff members or use the automatic transcription process to convert voice messages to text. If staff are actively engaged with other calls, Tirade will automatically route messages according to predetermined rules while allowing an administrator to override the automated routing, if necessary.

VOICE AND FACIAL IDENTIFICATION

Tirade will capture a call center staff member's voiceprint or faceprint.

If customers are finicky about who they speak to, alternate staff members can look and sound like their preferred contact. Build stronger customer rapport by providing support staff continuity, even when staff members are unavailable due to vacations, turnover, leave or illness.



ADVANTAGES OF THE TIRADE ARCHITECTURE

SECURE USER INTERFACE, ROBUST SYSTEMS BACKEND, GLOBAL TERMINATION AND ORIGINATION FROM CSPs AND MOBILE GATEWAYS

Tirade's advance architecture stems from a simple and secure user interface and extends to regional points of presence through Labyrinth network and controlled by Perfecta's backend systems.

Tirade User Interface: Tirade's user interface (UI) is a real-time universal communications application operating on a **virtual desktop infrastructure (VDI)** that utilizes WebRTC, two-factor authentication and **leaves no residual footprint**. From the UI, users can manage messaging, monitor all activity through the operational dashboard and interact with the automated workflow system.

System Backend: Tirade's virtual communications servers utilize a secure software-defined networking (SDN) stack that can connect via WAN to regional carrier gateways. At a high level, the Tirade system backend is a custom soft-switch (ex. PBX / private bank exchange) with built-in selective forwarding units (SFUs) as well as STUN and TURN servers to avoid being block by disparate networks. The technologies are complex, but **Tirade is even more robust and secure than other UCaaS offerings**. All backend systems and subsystems interact using authenticated connections and encrypted data. Tirade's system backend integrates with large CSPs, as well as smaller, regionally-based CSPs and mobile wireless gateways.



Cloud Service Providers (CSPs): Tirade currently integrates with CSPs such as Twilio, Nexmo, Telnyx, SMS Cloud, Bandwidth.com, BulkSMS.com, SMS Global, Sinch and Plivo. We continually add new partners that allow you to remotely manage messaging, avoiding the costly process of installing your own hardware or expending labor hours and resources to utilize the APIs needed to access CSPs.

Mobile Wireless Gateway: Tirade currently integrates with forward-deployed mobile wireless gateways such as OpenVox, Ejoin, China Sky, and Yeastar. Using VPN technologies to connect mobile wireless gateways to the Tirade network, users can forward-project messages through the network without crossing international telecommunications border gateways. Messages are transmitted from the local telecommunications infrastructure.

Data Storage and Export: Tirade uses a sophisticated log and searchable data repository (ELK stack) with operational data stored in encrypted databases. Data can easily be exported to other any trusted database or file format for integration with other organizational marketing information, analytic tools or analytic data stores.

Integration with Labyrinth: By integrating with Labyrinth, users can boot up their virtual phones on a VM (virtual machine) and download their favorite apps as well as browse the internet securely and privately. With Tirade and Labyrinth, you can interact with your clients through social media, voice, MMS and SMS, providing a more comprehensive customer relationship with more connectable touchpoints.



Add-ons: Tirade has several add-ons including:

- Integration with Polycom™ phones and conference line phones
- Mobile apps for call center staff that utilize VPN connections for sending and receiving messages allowing staff to use Tirade-assigned phone numbers, not their personal phone numbers.
- Integrated conference call support that allows a conference call organizer to have recordings and/or automated transcriptions for each conference participant.
- Integration with 3rd party video-calling apps

EFFICIENT AND SECURE THE TIRADE SYSTEM

INTERNATIONAL REACH - INTERNATIONAL BORDER GATEWAYS - INTEGRATION INTO SMS GATEWAYS AND CSPs - CALL CENTER CAPABILITIES - MULTI-LINGUAL SUPPORT

Telecommunications have come a long way from the overly complex, legacy hardware they once were. Perfecta's Tirade system is built to provide a robust, seamless and scalable solution for our clients who want a global reach and rich telecommunications feature set to their platform.

International Reach: Tirade has international reach and our interactive voice and text system allows you to send and receive messages from a local phone number of your target market and manage it globally (from anywhere).



International Border Gateways: International border gateways and local telephone service providers (TSPs) can limit or throttle the number or rate of text messages entering or leaving a country. Using Tirade, messages are not routed through international border gateways, increasing the likelihood your messages will be received.

Integration of SMS Gateways and CSPs: Using CSPs enable a rapid implementation and selection of local numbers for sourcing messages however setting up accounts with CSPs can be complicated. In less developed areas of the world, telecommunications infrastructure can be non-existent or unreliable. For sending text messages within a local area, forward-deploying an mobile wireless gateway can avoid restrictions imposed by cloud providers and enable access to areas of the world that have limited access to telecommunications infrastructure. Tirade integrates with both CSPs and mobile wireless gateways.

Call Center Capability: While Tirade is a product, **Perfecta also offers a call center team as a service with skills, clearances and/or background appropriate for communicating with the target market.** Our staff are multilingual allowing for a more genuine and authentic interaction between message recipients and staff in the call center.

Multilingual Support: Messages can be composed in English, Russian, Farsi, Arabic, Chinese, French, Spanish or Pashtu using a built-in soft keyboard.



Integrated Suite of Products: Perfecta's SaaS product suite consisting of Labyrinth, Tirade, and DeckPunch delivers 360-degrees of operational coverage of cyber security, secure communications and persona management. Users of DeckPunch can communicate directly via Tirade, DeckPunch supports social profiles consistent with Tirade's real-time communications and both leverage the attribution capabilities of Labyrinth to ensure your digital fingerprint is properly attributed and obfuscated from threats.

Perfecta provides several configuration options that make global messaging and management a reality for any size company. An organization may wish to implement Tirade as a managed service, removing themselves from any interaction with the system while periodically receiving marketing leads. In a managed service implementation, Perfecta provides all necessary staff and functionality; you provide the message and the phone numbers.

For organizations that wish to manage their messages and interact with recipients, **Perfecta offers a web-only configuration**, integrating VoIP with cloud providers. We can forward-deploy mobile wireless gateways allowing smooth integration of VoIP, cloud communications and provisioned gateways. Perfecta also provides mobile wireless gateways that an organization can deploy and manage themselves.



ABOUT US

For over a decade, Perfecta has been trusted by organizations around the globe as a premier SaaS provider. Perfecta is ISO 9001 certified compliant and recognized as a Commercial Solutions for Classified (CSfC) trusted integrator by the NSA/CSS. Our experienced staff include former members of the U.S. military as well as global experts in voice, video, data streaming and network security.

Check us out at www.perfecta.com.

