



The Next Generation Trading Floor

IP Based Trading Turrets Come of Age

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Introduction

Communications systems have come a long way over the last decade. This is especially true in the financial trading communications space. There are several reasons for this change. First and foremost, there are social reasons. The world has evolved into a community-based workforce. The days of one trader talking to one client or one colleague at a time are over. Decisions are made faster, information needs to be presented more quickly, and people need to collaborate real-time via voice, data, instant messaging (IM) and audio/video conferencing. They also need to connect via many different devices such as traditional handsets, desktops and mobile smartphones.

There are also three technological enhancements causing these rapid changes. First, traditional digital Time Division Multiplexing (TDM) system architectures are being replaced by Internet Protocol (IP) server-based

architectures. Second, fast processors, affordable storage, and ubiquitous connectivity options offer today's businesses a multitude of on-premise and hosted (read: “cloud-based”) communication solutions options. Lastly, virtualization technologies and the promise of cloud computing are delivering dramatic productivity, efficiency, and cost savings to organizations of all sizes. IP Communications are here. The hype has been replaced by adoption. The benefits include tangible business results.

The time is now to take advantage of these changes. The new world of financial trading happens on a global level with multiple people collaborating with information shared over a ubiquitous IP communications network.

This paper will define some of the technologies that are driving this communications evolution, as well as highlight the way IP trading turrent communications solutions are changing the way business is done on the trading floor.

The Challenge

Over the next decade, the majority of the financial trader workforce will have grown up with the internet and cloud-based technologies. Innovative communications technologies are, and will become increasingly, paramount in offering them productivity-gaining and efficiency-gaining capabilities.

In addition, the way work gets done on the trading floor is changing. Communities of people will make decisions on a global, boundary-less basis, with information shared over voice, data and video. This is the anywhere, anytime era of communications.

The community approach to decision and deal-making must also comply with regulatory requirements. This means that all documentation that is relevant to the trading process must somehow be integrated. This can occur with IP-based unified communications solutions where all data and information can be captured on one platform and architecture.

Technologies Triggering the Change

There are several key technology enablers driving the change in the communications systems that are being deployed on today's innovative trading floors. For the purpose of this paper, we will focus on the five most relevant:

- Internet Protocol (IP) solutions are transforming the communications experience for traders by enabling converged communications including traditional voice calls, unified communications and messaging, instant messaging (IM), chat and audio, and video conferencing. They may also be integrated with additional enterprise applications including:

Customer Relationship Management (CRM) and Order Management Systems (OMS) further optimizing the productivity on the trading floor.

- Session Initiation Protocol (SIP) is a signaling protocol widely used for controlling communication sessions (e.g., voice and video calls) over IP. Other SIP supported applications include: instant messaging, video conferencing, presence information, streaming multimedia distribution, and file transfer. SIP offers cost effective, open-standards connectivity for distributed trader voice solutions for secondary sites.
- Unified Communications (UC) refers to the concept of consolidating phone, email, fax, chat, video, presence and collaboration into a single unified channel, either on a device or on a computer. If you receive a voicemail, it is deposited in your email inbox where you can listen to the message, review the availability status of the party who left it, and respond to them in their desired communication channel, whether it is chat, phone or email.
- Virtualization Software. Today's computer hardware was designed to run a single operating system and a single application, leaving most machines vastly underutilized. Simply put, virtualization technology allows you to run multiple virtual machines (servers) on a single physical machine (server),

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with each virtual machine sharing the resources of that one physical computer across multiple environments.

- Cloud Communications is a set of web-based tools and services that permit users to acquire computing resources and development capabilities to build or support applications, or perform specific IT functions, on a pay-as-you-go basis
- Hybrid Cloud provides a dedicated instance of these services for your exclusive use, and as a result can be secured and accessed privately from remote and satellite offices. While they are housed in a provider's data center, they do not leverage the pool of shared resources, so they cannot grow and shrink. They also do not include failover and redundancy.

Trading Turrets Defined

A trading turret is a specialized telephony key system, also known as a dealer board, which is generally used by financial traders in conjunction with other tools that make up their electronic trading platform.

Voice trading turret systems differ from typical phone systems due to specialized features, functions and capabilities specifically designed for financial traders.

Trading turret systems provide:

- The ability for traders to visualize and prioritize incoming calls from

customers or counter-parties and make calls to these same people instantaneously by pushing a single button to access a line.

- Multiple handsets and multi-channel speaker units that are generally shared by teams (e.g., equities, fixed income, foreign exchange and global trading organizations).

As mentioned briefly in the introduction, these systems have evolved significantly over the last decade. Trading turret systems traditionally relied on distributed switching architectures that enabled parallel processing of calls ensuring a non-blocking scenario due to there being more call paths than users, which in turn offered a certain level of fault tolerance and business continuity. As processing power has increased and switching technology has matured, there has been a tectonic shift away from these TDM solutions to more flexible and scalable IP-based solutions.

There have also been major ergonomic enhancements. The footprint for the turret sets is sleeker, enabling it to take up less desktop space. The touch screens are larger and brighter and feature a more intuitive user interface. There are more softkeys for programming additional features. Over the last several years, a soft client has been introduced by many vendors to allow users to use their PC's as their telephony capability as well.



The Key Benefits of IP-based Trading Turret Solutions

- Increases collaboration to reach a common decision faster
- Enhances employee satisfaction and team productivity
- Location-independent resource planning
- Increases redundancy for business continuity
- Limits damage caused by unforeseen failures
- Adheres to legal requirements
- Ensures compliance
- Protects existing investments
- Reduces total cost of ownership (TCO)

Benefits for the Business

The benefits of IP-based trader turret systems extend beyond those that the traders enjoy. The trading communications platform is now within the management and operation of the Information Technology (IT) organization rather than the traditional telecom organization. This makes these applications more strategic to the overall organization. There is less risk of failure with fault-tolerant capabilities built into the IP-based cloud architecture. The CIO can now gain back part of his IT staff's time from these projects and focus them on other strategic core projects across the organization.

IT / Data Center Model

Today's financial trading firms should be looking for trading turret systems that were built to be run as a server-based architectural infrastructure run as part of the hardened IT data center. This approach enables the management, administration, and operations of the platform to be familiar to the CIO and the IT organization. The trading turret application simply runs as another mission-critical application for the trading floor.

Economics and Total Cost of Ownership

IP-based and SIP-based communications services are an amalgamation of technologies and business practices that enable organizations of all sizes to build,

deploy, monitor and scale applications by leveraging resources accessed in a hybrid cloud (data center and private cloud).

Leveraging IP-based communications services can save businesses money by:

- Increasing business agility by allowing you to increase or decrease computing needs on the fly.
- Reducing capital expenditures by renting applicable 'as a service' offerings.
- Reducing the need for a multi-million dollar IT infrastructure in order to compete in the marketplace (i.e., reducing financial risk).
- Reducing TCO and enjoying faster return on investment (ROI).
- Reducing hardware and software requirements with automatic system and software upgrades.
- Providing redundancy of servers, power, and bandwidth.
- Providing simple scalability.
- Going green. Lesser needs for IT infrastructure result in a favorable impact on the environment.

Key Features for Traders and Administrators

The trading turret systems must be scalable and flexible to meet the ever-changing needs of today's trading firms. The systems must have a full suite of features integrated into a single software instance that are transparent for the trader. The systems must offer flexible deployment options (e.g., premise-based and cloud-based). Lastly, the systems must be able to be deployed quickly and be seamlessly equipped to be managed and monitored from a browser-based or portal-based management user interface.

Trading turret handsets must be available in multiple configurations that have features and functions to meet the differing needs of users within the organization. Features such as speaker, intercom, and hoot must be table stakes for today's community-based collaboration on the trading floor. Mobility features with Direct Inward Dialing (DID) forwarding to mobile phones, soft client deployment on PCs and laptops and the ability for a trader to log

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into any turret handset are paramount for the always-on-the-go modern trading floor. Other key features include Unified Communications features such as:

- Click-to-dial
- Caller ID
- Voicemail
- IM
- Presence
- Video/audio conferencing
- CRM integration
- Microsoft Outlook and Active Directory integration

A Sea Change is Occurring

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arrival of cloud-based technologies, we are experiencing a new era in anywhere, anytime communication.

The IT Data Center model of capital investment and ongoing management of systems has changed the game from the historical capital-intensive purchase of hardware and software to a predictable operating expense model has allowed for a true pay-as-you-go-model. This is especially relevant to the financial trading market that experiences growth spurts and troughs in a frenetic sine wave fashion. The power of a singular distributed IP architecture in the data center will offer a platform that offers consistent communications features affording increased efficiency and agility to the business.

In addition, private cloud-based solutions enable these organizations to turn up smaller satellite offices as they experience incremental growth, rather than purchase full-fledged systems with capital that may far exceed their needs and capacity requirements.



Things to Remember

All new technology frontiers hold the promise of what could be, and pitfalls for what will be. As previously stated, thorough due diligence should be completed before making any fundamental technology change.

The following areas need to be addressed before any vendors are chosen and any contracts are signed:

1. Security - When doing due diligence on a potential vendor, one should look carefully at its security infrastructure and track record with other customers.
2. Vendor Reputation - Get references from other customers, discuss the potential technology partner with colleagues, and research them on the Web.
3. Business Continuity Plans - Data protection and backup and disaster recovery plans must be thoroughly examined to ensure the safety of your critical data. As mentioned earlier, this is a benefit of the IT Data Center model.
4. Pricing Models - You need to understand the pricing variables available to you. These models could be based on: the storage required, software licensing, moves, adds, and changes (MACs), number of users, or central processing unit (CPU) time. Or, it could be a subscription-based model.

Summary

Ultimately, you will need to determine if an IP-based trader voice system is right for you and your business. Remember, do your due diligence, and start with an area of your organization that makes the most sense to deploy these types of systems. Whether you make your choice due to budgetary constraints, lack of the appropriate skills, or a desire to focus your IT staff on core competencies - maybe it's time your business embraces IP-based communications solutions.

Regardless of the path you choose, make sure that the products you select use standard protocols, have a well-documented application programming interface (API) to support future plans, and include a documented and tested list of interoperable equipment. Also, confirm that the vendor you are considering can demonstrate what they are selling, preferably outside of their demo lab.

IP-based trading turret solutions hold great promise. Tread carefully and execute your seamless communications strategy with a tactical approach that has clear and realistic expectations.

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About Unify

Unify is one of the world's leading communications software and services firms, providing integrated communications solutions for approximately 75 percent of the Fortune Global 500. Our solutions unify multiple networks, devices and applications into one easy-to-use platform that allows teams to engage in rich and meaningful conversations. The result is a transformation of how the enterprise communicates and collaborates that amplifies collective effort, energizes the business, and enhances business performance. Unify has a strong heritage of product reliability, innovation, open standards and security.

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