



# VoIP – The Truth Behind the Hype

*The reality is hyper service and hyper savings for most organizations.*

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VoIP (Voiceover Internet Protocol) is rapidly gaining popularity with organizations of all sizes. Among the many reasons is the fact that it simplifies and streamlines a wide range of business applications. It is also the basis for advanced unified communication applications – such as video conferencing - that have the potential to transform businesses.

## What is VoIP?

In a traditional analog phone circuit, you would initiate a call and it would transmit across a set of copper wires to the person you were calling – this requires a single physical connection. The obvious limitation is that it can only handle one call at a time

VoIP allows users to send telephone voice data across an IP data network, whether that's a flat-rate broadband Internet connection or a business's own private managed network (which has the advantage over broadband of better security and voice quality control).

VoIP turns voice signals into digital data packets that are independent of a specific communications channel and can be sent via currently available communication channels. They can also be transmitted across any communication channels that are developed in the future.

Those same copper wires, that could only handle one analog call at a time, can then transmit multiple conversations - along with data such as information, video, and instant messaging. Another plus is that the VoIP data packet can also be transmitted through other communication channels such as satellite, cable, and Wi-Fi.

## Other Relevant Terms

- *IP telephony* is the suite of VoIP-enabled services including the interconnection of phones; related services such as billing and dialing plans; and features such as conferencing, call transfer, call forward, and call hold – for many organizations, these services were previously provided by a PBX.
- *IP Communications* refers to business applications that enable communication features such as unified messaging, integrated contact centers, and enriched-media conferencing. This includes data, voice, and video features.
- *Unified Communications* integrates technologies that simplify and unify all forms of communications regardless of time, location, or the particular device.

## The Components of a VoIP Solution

There are a number of possible components to a VoIP solution. The ones you choose, and the capabilities of your choices, will depend on what your current and future needs are.

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### Soft Phone

A soft phone allows your electronics to function as handsets – meaning that you can send and receive calls through your corporate network on your laptop and other mobile devices that don't have traditional handsets. You can also use the soft phone feature to participate in phone and video conferences, pick up voicemails, and check call logs.

### Single-Number Reach

This allows users to be contacted on multiple devices - regardless of platform - with one number. It integrates a user's corporate identity and personal identity into the same wireless device. This streamlines business by requiring that clients, prospects, and coworkers only remember one number.

### Conferencing

Conferencing - which includes audio, video, and Web-based capabilities - can be designed for peer-to-peer communication, room-to-room, and/or high-def.

### Reporting Analytics and Management

VoIP management and analytic tools allow organizations to monitor the system and generate in-depth call reports

## What Can VoIP Do for Your Business?

The biggest plus is the cost savings on local and long distance calls. Also, organizations can easily add other voice services without installing new equipment, and can have a number outside of their own area code – which is essential for localizing customer service. There are some drawbacks, but first the benefits.

### Benefits

- Lower Cost: VoIP providers can offer more competitive pricing because VoIP is not regulated by the FCC and is not subject to the same taxes as standard phone service. VoIP providers don't have to pay expensive interconnection fees to another company's network. Routing phone calls over the Internet also eliminates long distance phone charges.
- Data and Voice Integration: VoIP phones are equipped with features that streamline access to audio files – for example, users can retrieve voicemail messages through their email accounts instead of calling the office. They can make and receive phone calls using a traditional phone handset, through a personal computer, or with a laptop running a soft phone.
- Mobility: Voicemails can land in Outlook as email messages or forward to alternate numbers. This means users can take their VoIP phone number with them anywhere in the world. Theoretically, a U.S.-based salesperson could be visiting Singapore and the hotel room phone would ring whenever someone called that person's U.S. office phone. Not only is this convenient, but it dramatically reduces fees by eliminating charges for international phone connections.
- Many Software Options: A myriad of software features and options allows flexibility and low cost updates. Some of the features will be included with the system purchase and others, such as call centers and call accounting, can later be added at a relatively low cost. VoIP systems have extensive configuration options for tailoring the system to the organization's needs.
- Central Communications: Use of corporate communication resources such as voicemail, automated attendant, and email can be centralized – this simplifies support and maintenance.
- A Single Cable System: VoIP uses one cable system instead of separate wiring for telephones, data networks, and computer networks.
- Web-Based Administration: VoIP's Web-based administration capabilities significantly lower the number of vendor service calls.
- No Voicemail Ports: Since voicemail is usually included at no additional charge, companies no longer need to buy voicemail ports.

## Drawbacks

While VoIP solutions are less expensive, they can be less reliable than traditional services (although this is changing). Using certain configurations, users can still take advantage of the traditional phone provider's reliability while benefiting from VoIP's many pluses. But it may cost more. Other VoIP issues are:

- Voice quality
- Bandwidth dependency
- Power dependency
- Emergency calls

All four areas are currently being addressed and remediated by hardware and software manufacturers and service providers with varying degrees of success. Most important is the emergency call situation. Since VoIP service providers are not bound by FCC regulations that mandate access to the 911 emergency system, not all providers offer it. This is definitely something users should ask their vendor about.

## Choosing a Vendor

Since the VoIP system's set-up is critical, it's important to deal with a vendor you know and trust. An inferior set-up could mean – among other things - dropped calls, poor voice quality, and subpar network performance. Some of the set-up issues your vendor should consider are:

- Whether the additional VoIP system traffic – including videoconferencing - can be accommodated by your existing network infrastructure
- The best network components and network configuration for prioritizing voice traffic and voice quality
- A correct security setting that allows ease of use, but prevents hackers from making long distance calls on your system
- Provisioning regular backup of the system's configuration and data

The ideal vendor will have network experts on staff and offer an optimal combination of product choice, technical support, and competitive pricing.

While many VoIP hardware and software vendors are now moving away from the proprietary systems of the past and aligning with industry standards, not all vendors are doing so. This means that you need to carefully review the products you're considering by asking the following questions:

1. Is the basic phone system software based on industry standards or is it proprietary?
2. Is the system hardware standard or proprietary?
3. Is it a pure VoIP system?
4. Are the handsets SIP (Session Initiation Protocol) compliant or is the handset technology proprietary to the vendor?<sup>1</sup>
5. Is the system capable of reasonable expansion or will I be forced to replace hardware or software? Some vendors offer different systems for different industries and organization sizes – which makes some upgrades and transitions rough.

Among the other considerations in choosing a vendor is the ability to proactively address your VoIP hardware and software needs. Failure to do so could mean the difference between replacing the entire system and updating select components.

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VoIP is one of a suite of new technologies, including virtualization, that took off during the recent economic downturn – mostly because these technologies allowed companies to cut costs without compromising service quality. As the economy continues to recover, these same companies are expanding and capitalizing on the new capabilities of these evolving technologies. While no solution is perfect, the bottom line is that most organizations utilizing VoIP have benefited from better customer service, better employee productivity, and lower costs.

<sup>1</sup> SIP is the common language for interfacing devices.

### About B2B Computer Products

Award-winning B2B Computer Products LLC was identified by *Inc.* magazine as one of the fastest growing businesses of its type in the U.S. for 2 years in a row and by Crain's as one of the largest privately held companies in the Chicago metro area. B2B Computer is a single-source provider of products and manufacturer-certified services that include virtualization, VoIP systems, data deduplication, disaster recovery, SAN storage, server consolidation, energy-efficiency improvement, and testing environment implementation. B2B Computer's engineers can design, configure, install, and/or manage the products and systems they sell to their clients. As a national business-to-business reseller of computer hardware and software representing hundreds of manufacturers – B2B guarantees a best practice combination of competitively priced customized products and expert services. In addition to its Addison, Illinois headquarters and multiple distribution points, B2B Computer's offices are in Chicago; New York; Davenport, Iowa; Philadelphia; and San Francisco. To contact B2B Computer, call 1-877-222-8857 or visit [www.B2BComp.com](http://www.B2BComp.com).

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