VOIP

THE FUTURE OF COMMUNICATIONS IS NOW

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VOICE OVER INTERNET PROTOCOL

In the past decade, business technology has seen some drastic changes. The use of computers and the Internet are now regular parts of business operations. Company records, once stored in a filing cabinet as paper documents, are now stored digitally, making the documents much easier to find and manage. Accounting practices, once detailed in ledgers and calculated manually, are completed by computers in a fraction of a second.

Telephonic communication has also evolved in the digital age. Telephone lines and rotary dials have transformed into unified communication devices which allow people on different continents to collaborate on a project, face to face. One major technology that has made unified communication and collaboration possible is Voice over Internet Protocol, or VoIP. More and more often, businesses are abandoning landline telephone for this efficient, and economic, alternative. In a sense, VoIP has transformed the way that we communicate just as much as the original telephone did, each being a breakthrough of modern science and technology that reinvented the way that we communicate.
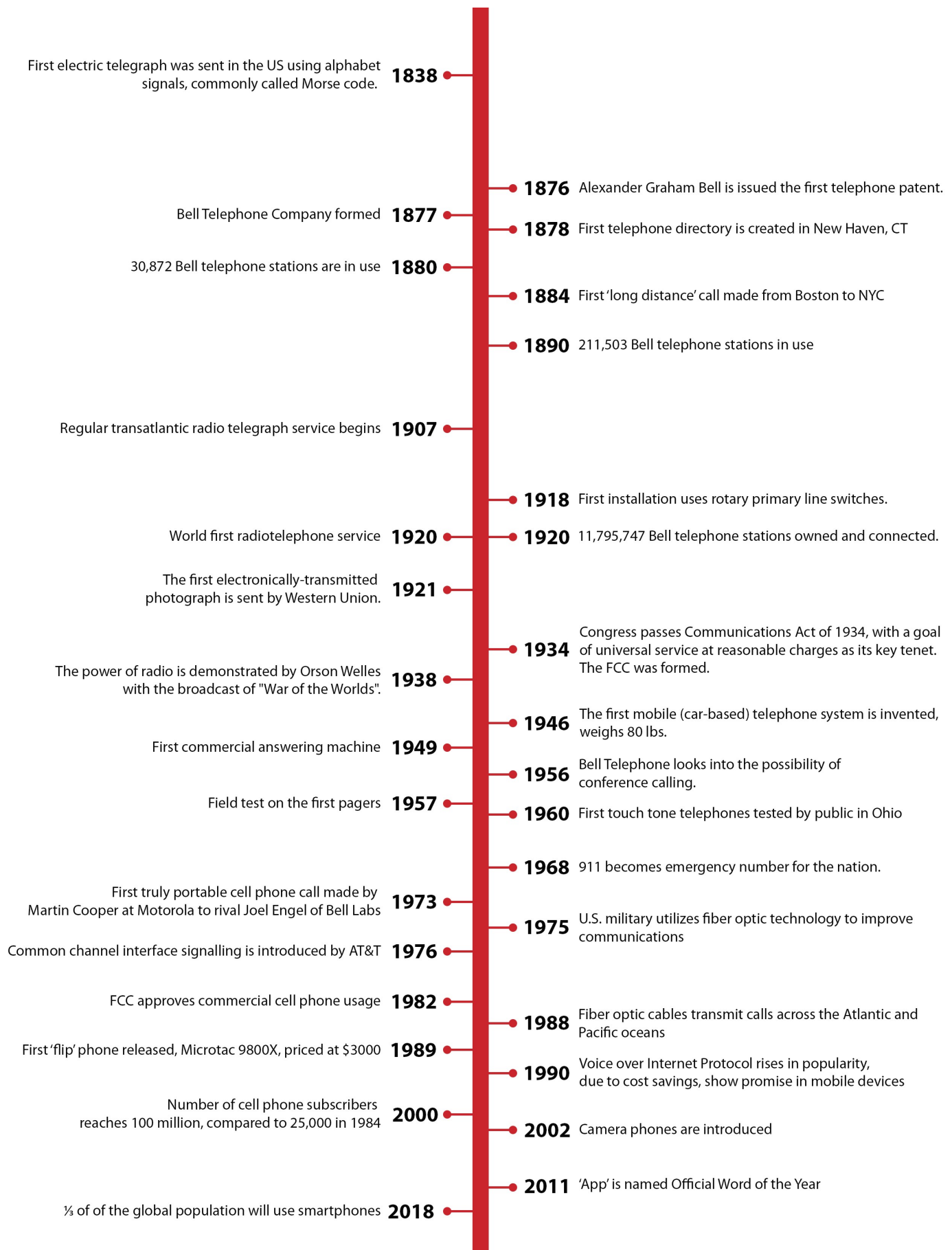
Using VoIP has many benefits over using the old and outdated landline, but how can we truly see how great these benefits are without revisiting what made the original telephone such a historically significant device? We'll first examine the development of the telephone and what made it such an important invention; afterward, we will investigate VoIP itself, and how it compares to more traditional means of business telecommunication. We will then discuss the various benefits that VoIP can provide for your company.

"Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without talking about the other."

-Bill Gates

II. THE HISTORY OF THE (NOT SO) MODERN TELEPHONE

1838 — First electric telegraph was sent in the US using alphabet signals, commonly called Morse code.

1876 — Alexander Graham Bell is issued the first telephone patent.

1877 — Bell Telephone Company formed

1878 — First telephone directory is created in New Haven, CT

1880 — 30,872 Bell telephone stations are in use

1884 — First 'long distance' call made from Boston to NYC

1890 — 211,503 Bell telephone stations in use

1907 — Regular transatlantic radio telegraph service begins

1918 — First installation uses rotary primary line switches.

1920 — World first radiotelephone service

1920 — 11,795,747 Bell telephone stations owned and connected.

1921 — The first electronically-transmitted photograph is sent by Western Union.

1934 — Congress passes Communications Act of 1934, with a goal of universal service at reasonable charges as its key tenet. The FCC was formed.

1938 — The power of radio is demonstrated by Orson Welles with the broadcast of "War of the Worlds".

1946 — The first mobile (car-based) telephone system is invented, weighs 80 lbs.

1949 — First commercial answering machine

1956 — Bell Telephone looks into the possibility of conference calling.

1957 — Field test on the first pagers

1960 — First touch tone telephones tested by public in Ohio

1968 — 911 becomes emergency number for the nation.

1973 — First truly portable cell phone call made by Martin Cooper at Motorola to rival Joel Engel of Bell Labs

1975 — U.S. military utilizes fiber optic technology to improve communications

1976 — Common channel interface signalling is introduced by AT&T

1982 — FCC approves commercial cell phone usage

1988 — Fiber optic cables transmit calls across the Atlantic and Pacific oceans

1989 — First 'flip' phone released, Microtac 9800X, priced at $3000

1990 — Voice over Internet Protocol rises in popularity, due to cost savings, show promise in mobile devices

2000 — Number of cell phone subscribers reaches 100 million, compared to 25,000 in 1984

2002 — Camera phones are introduced

2011 — 'App' is named Official Word of the Year

2018 — ⅓ of of the global population will use smartphones

III. WHAT IS VOICE OVER INTERNET PROTOCOL (VOIP)

For most of us, it's hard to imagine a time when two businesses located in different areas looking to collaborate required a horse and messenger to communicate, sometimes taking months to complete a transaction. However, as time progressed, so did ease of communication.

Conference calls have been used in boardrooms since the mid 1950s. Landlines were used in nearly every household until mobile devices were introduced and eclipsed them. Now, the introduction of the Internet has provided us with the next step in collaborative communication: Voice over Internet Protocol (VoIP) as part of a Unified Communication and Collaboration (UCC) solution.

In short, VoIP is a means of communicating by telephone *using the Internet transmission*, as opposed to a traditional landline. Just as the Internet has opened countless doors and opportunities for other types of communication, with VoIP, it offers a reliable method of communication with many features that were simply not possible with traditional phone.

Many businesses find VoIP to be optimal for long-distance phone calls and even video meetings, thanks to it's convenience, flexibility, and low operational costs.

Some might not realize the immediate differences between the way that VoIP and a traditional telephone line functions. After all, you're still basically doing the same thing, right? All you're doing is calling someone, listening to them speak, then speaking back. Big deal. However, the differences between VoIP and traditional telephony go much deeper than you would think.
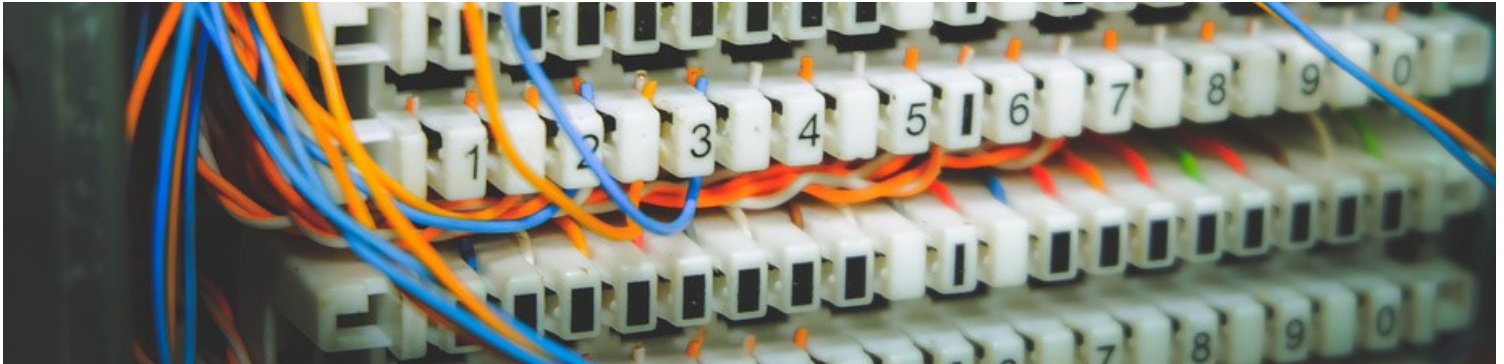
HOW THEY WORK

One thing is the same between the two types of telephone systems--they both utilize a PBX, or a private branch exchange, which is the phone network a company uses to communicate. According to Oliver Kaven's article in PC Magazine, "VoIP Gets Down to Small Business", "all users within the company share a certain number of outside lines for making and receiving calls. Internal calls are routed without the PBX and generally don't require outside connectivity" (Kaven 2005). The big difference lies in how the communication occurs between the two sides.

With the traditional business phone system, PBXs connect their proprietary phones to one central switch, and from there all calls are redirected and rerouted. These installations rely on traditional telephone wiring to bring each individual phone line to the patch panels, which then connect to concentrators and to the telephony switch. This switch is then connected to the telco box and can be split into multiple voice circuits and ISDN lines, making it the traditional telephone that we all remember from the early days of telecommuting.

VoIP, however, uses a different type of PBX based off Internet Protocols, as one might guess from its name. It still connects into the telco, but instead of using the voice circuits, it transfers the voice over an IP network in digital signatures. All of the outbound calls are handled as normal through the telephone lines, but any calls made internally, or those going toward branch offices, are handled via the Internet.

One result of using VoIP is that businesses with it implemented aren't paying for any expensive telephone networks. Since the voice traffic is being routed through existing data networks rather than setting up a whole new telephony system, many businesses enjoy paying only for what they use. This in particular is very useful for companies with many offices in different locations, as the cost for long-distance phone calls has been eliminated, making it far more cost-efficient.

V. BENEFITS OF USING VOIP

When it comes to using a telephony system, VoIP is about as modern as it gets. By sending your voice over the Internet using VoIP technology, your business will enjoy many benefits that would be nothing but wishful thinking for users of traditional telephony systems.

i. COST SAVINGS

As previously mentioned, VoIP is significantly cheaper and more efficient to use than a legacy telephone system. Long-distance business calls add up significantly over time, and they could potentially cost you and your business a small fortune in normal calls. By switching to a VoIP provider, you save money by eliminating these additional costs, including most costs associated with equipment, manpower, maintenance, and telephone lines. Thanks to the VoIP network being attached to the IP address and Internet network, the need to pay for long-distance phone calls is diminished, making it much more affordable in the long run.

As with any major change, there are initial setup costs, but the overall savings will more than outweigh these initial costs. By managing one network and removing your old, legacy telephony system, you'll be able to concentrate more on the VoIP network, and reduce the administrative burden. This also reduces the burden on your consumers by decreasing the amount they pay to receive your calls.

ii. RICH MEDIA SERVICES

When you are using a traditional telephony system, you get the basics; voice communication, fax services, and voicemail. However, wouldn't it be great if you could also utilize video chat technology for webinars and team meetings? VoIP offers all of these services, also allowing you to share images, pictures, and other media.

Thanks to the Internet, society grows more and more connected by the day. The current generation is more in tune with this than anyone else, as they browse social media sites and use it to communicate more than any generation before. They expect to be able to exchange media with their telephony service, whether it's their smartphone or the Internet. This makes the demand for multimedia telephony quite high, and reinforces the market for VoIP so that it can be made affordable for all.

iii. PORTABILITY

Traditional telephony required a dedicated telephone line that a phone number was attached to, and it was impossible to move too far from your home without a mobile phone. Furthermore, if you were to move elsewhere, you would have to get a whole new telephone number. People would have to ask the telephone company to enable a new telephone number whenever they would relocate.

With VoIP, you don't have to worry about any of those problems. So long as you have access to the Internet, you can use the same phone number anywhere you want. This is great for business owners who are always on the move to spread word of their vision and their product. With VoIP, you can use the same number no matter where your travels take you, even on the other side of the world!

The same can be said for the phone's services. Wherever your IP phone goes, your service goes, and you'll never have to worry about not being able to access your call features, voicemail, call logs, security features, service policy, and other important features.

iv. APPLICATION INTEGRATION AND COMPATIBILITY

VoIP is on the application level of software, which means you can use other applications that integrate with it to enhance collaboration efforts between yourself, your employees, and your clients - all remotely. You can integrate email, web browsing, instant messaging, social networking, and many other applications to work together with others. This allows you to create a sense of collaboration between your team, and more importantly, your clients - they'll feel like you are there with them and are doing everything you can to assist them with whatever they need.

In today's world of mobile technology, it simply doesn't make sense to cling to ancient landline technologies. You need the versatility and cost savings that VoIP offers to businesses. It is illogical to not take advantage of something that can save your business money, as well as improve communications both in and out of the office. VoIP is the saving grace that many companies need to stay one step ahead of their competitors in a world where mobility is everything.

Directive is the key to unlocking this latent power that dwells within your business. There are many different types of VoIP providers out there, but not all of them are on equal footing. Our technology professionals will work with your business to ensure that you get the best value and return-on-investment for your VoIP technology.

Need help with your VoIP decision?

Congratulations, you're thinking about the future of your business! Making a change to your communication infrastructure is an important decision--but knowing you're ready to make the change is only the beginning.

We strongly believe in properly planning for the significant transition you are about to undertake, keeping your specific goals and objectives in mind.

If you're ready to move into the future, reach out to us today!

Call us toll free at: **888-546-4384**

330 Pony Farm Rd Suite 3, Oneonta NY 13820
Phone : 888-546-4384
Email : info@directive.com

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