A Little Phone History……

By Michele Ahlman

Remember Ma Bell?

Up until about 1968, the only phone you could have was one that the phone carrier (Ma Bell) manufactured or certified. These phones were offered as leases on your monthly bill. You certainly couldn't run down to Target and purchase your own phone.

This was because the phone company completely controlled the network and the standard of manufacturing for the telephone which guaranteed the system and the phone worked. There was never a problem with the phone connectivity or compatibility.

Then in the late 1960's entrepreneurs and other manufacturers realized the large market available for consumer choice with telephones. In 1968 a company called Carter Fone filed a lawsuit against AT&T claiming their phone did not cause damage to the PSTN and that AT&T restricted competition unfairly based on the claim other manufacturers phones cause damage to the network. Carter Fone won this landmark decision. The court's decision is often referred to as "any lawful device". In other words, the device (phone) had to meet the standards that the phone co. and the FCC agreed would protect the integrity of the network.

This was all good as it allowed for the development of a new consumer market of products….home telephones. Now a manufacturer could design and sell a telephone outside of the phone company as long as it passed FCC testing standards. This is the standard by which all telephones in the United States must be tested in order to be lawfully sold in the US. Thereby considered a "lawful device". The standard was appended with new requirements such as hearing aid compatibility and remains the standard today. All telephones or devices in the US that attached directly to the PSTN must have FCC approval. All is well in the world of communication. Phones worked.

Then here comes the new kid on the block. In the 1990's the Internet emerged as a remarkable advancement in data communication for consumers. The internet was exclusively a data communication network and has evolved into the world's largest shopping center as well as a vehicle for sending text, video and voice. Over the past 5 years, the cable carriers figured out they could compete with the large phone service carriers in providing complete communication packages including voice for the home as they tapped into their existing infrastructure where they had been sending TV and video signals via cable. They realized they could tap into the internet using their existing infrastructure which was also fairly unregulated compared to the PSTN. They then realized they could also compress voice and send it as a data stream across the internet, which was in almost every home.

This provided a great new source of revenue*. Note- the internet pipeline is not as rigorously regulated by the FCC for voice as is the PSTN*. This was supported by many as it provided plenty of competition which reduced costs to the consumer. Skype emerged. Sykpe tapped purely into the internet utilizing software to send voice. And then they followed…in fact, many many- oh, let's say hundreds have followed realizing they can tap into the existing internet utilizing software without any hard infrastructure to provide telephone service. Hmmmm, interesting. The phone carriers also followed suit by offering services that allowed consumers to send video and tap into the internet over the voice lines based on their existing infrastructure which became the DSL push. Today, both the phone company and the cable companies offer consumers high speed bundled services that bring video, data, TV & voice all over the internet. Awesome- right?! Well, sure when you are talking about video, data & TV but voice….well, here's the part where you want to pay attention; where this history lesson comes together and answers the question, why does digital matter to your program.

So, now we know a consumer can buy digital telephone service, which can literally come from a potential of hundreds of service providers, none of which are required to comply with rigorous FCC standards because they are not operating on the PSTN infrastructure. Remember earlier we mentioned the rigorous testing and standards implemented by the FCC which ensured products that attached to the good 'ol telephone system didn't screw things up. In order for a phone to work, these providers offer what is called an ATA or analog telephone adapter. ATAs can be either a separate "box", it can be a housewide ATA that is installed at the d-mark (the point where phone service enters the house). (Great- let's add to the confusion!) Here's where it gets fun. When a phone, that complies with all of the FCC standards is connected to a device, which is in essence the key handshake – the ATA, a product that is not required to comply with those same rigorous FCC standards, things can get ugly. Add to that, the reality that the internet presents so many variables in performance, connectivity and is for the most part inconsistent you can imagine how challenging it is to match the variables so that the phone works consistently. Ok, so now we know the phones in the US must meet all FCC standards to be sold legally which were written based on the good ol' PSTN analog phone network. Now, insert today's digital service reality- which is a completely different environment than the PSTN, should it be any surprise customers call saying- Hey, my phone doesn't work? Now all of the these digital service providers have certainly tested phones on their networks and ATA's and sure, they may work ok for a hearing person in a controlled test lab environment, but what happens when you jack up the volume and start adjusting tones? The real world teaches us a lesson. There is no way to know the exact environment the phone is operating in. We see this with our internet speed and connectivity. In one neighborhood, the connection is on steroids and totally rocks. In another, you could watch your hair grow before your file downloads. Now, if the phone is dependant on this network, how can an analog phone built to a fixed, defined PSTN network standard operate consistently well? The fact that you may have hearing loss and are using an amplified phone or other adjunct product, certainly makes it even more challenging.

So, what do we do? The service providers certainly are not going to accommodate us. We must step up, evaluate the realities and create products that work with our current environment.

ClearSounds has done just that. By developing a line of fully digital products, we have in effect provided our phones with a bigger brain – a full brain, so to speak. This brain can live in PSTN analog world and is smart enough to adapt to a digital environment as well by "reading" the environment and making adjustments to manage the signal properly.

So, I guess that makes the ClearSounds Full Digital Phones…well, smarter and dare I say, better.

For more information, call ClearSounds Product Specialists at 800.965.9043 or go on-line to www.clearsounds.com