

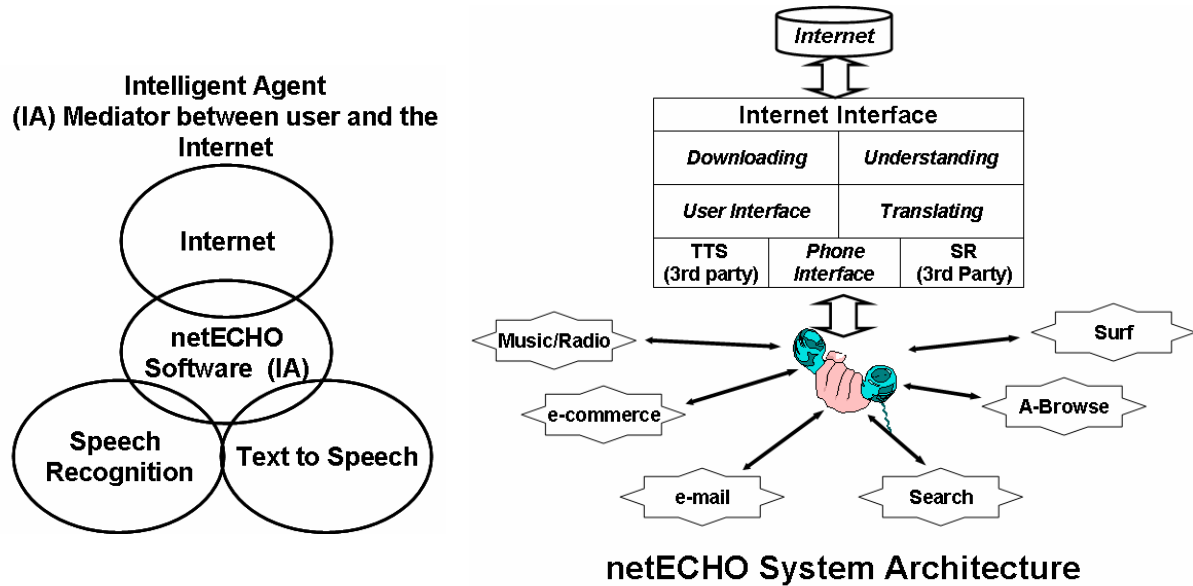
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Internet Speech is a new start-up company based in Silicon Valley, California. Our technology, Voice Internet, provides the internet to everyone, and every one means all types of people - disabled, blind, elderly, people having no computers, highly mobile people, and so forth. It is good for consumers, business, and governments. We do this by using telephones and your voice and without using a computer.

We are in the information age, and in the information age, information is money just like time is money. As you know the largest source of information is the internet, so we should all have the right to access this source of information. Unfortunately, that is not the case today because as you know there are about 400 million connected computers as opposed to 2.5 billion phones. The computer population represents about 14 percent of the total telephone population. Besides, it is not very easy for many people to learn how to use a computer. It is even difficult for people who have been using computers for a while as “keep on learning new features – like adware, spyware, registry cleaner, responding to various intermittent unwanted pop-ups - is a problem for many people”. The other way to access the internet today is through a personal device with either a cell phone or a PDA. These are great devices, but the user interface is very difficult because of the small keypad and small screen. More importantly, the content is very limited, especially for cell phones because one would need to re-write the content using another language such WML or CHTML, and there are over 2 billion of websites, and to re-write them will cost trillions of dollars, and hence is not very feasible.

Also, even if one can provide a great device, either a simple computer or personal device, there will be millions of people who would not be able to learn and use such a device. To overcome these limitations, we at Internet Speech, have come up with a solution, and that is providing internet by phone. What we are saying is “billions of dollars have already gone into today’s internet. Let’s use it. Let’s not try to re-write it, and let’s use it by writing a software **Intelligent Agent (IA)** that is intelligent enough to take today’s internet content and deliver it you over any telephone, in a manner that the delivered

content is short, precise, meaningful, easily navigable, and pleasant to listen to. If we can achieve these five features, then we have a good start.



We have such an intelligent agent, netECHO® as shown here, and it is a mediator between the user on the telephone and the internet. You just pick up your phone, make a phone call, and the agent is going to ask you, “What would you like to do? Would like to surf, or search, or email, e-commerce, or even listen to music”. Suppose you say “surf the net. “It will then ask you, “website name, please,” and you say, “United Nations” or “Yahoo” or something like that. Then it will download that page and extract all the text from that page. Now, if it is Yahoo, for example, then listening to all the contents on that page is good if it is an email because you’d not like to miss any words, but if it is news or other information then one doesn’t have time to listen to all the contents on that page. For such a case, the Intelligence Agent will give highlights of the page (called Page Highlights), and once you hear the highlights (usually three at a time so that you can easily remember them), you select one. The Intelligent Agent then will go to the desired page and it will pick only the relevant story from that page. It is similar to when we access internet pages using a computer. When we are looking at a website, and when we click something, we go to the desired page and read only the relevant contents as that is the reason we came to that page - we don’t read every thing because we neither have

time nor are interested to read everything on the desired page. Our software Intelligent Agent works the same way - reads the most relevant contents when it goes to the desired page.

The Intelligent Agent renders the content into a short, precise, easily navigable and meaningful way by using Page Highlights, Language Processing, Matching techniques, and Artificial Intelligence. Page Highlights is similar to page ranking used in search engines. It calculates the highlights based on the information present on the page, like font size, boldness, color, density of the contents and the meaning of the words. Then when we go to the desired page, the Intelligent Agent finds the most appropriate contents by using matching techniques, artificial intelligence and language processing algorithms.

What does this voice internet do for us? First of all, it bridges the digital divide because we can access the internet just using any telephone. It also bridges the language divide. Today, about 70 to 80 percent of the content on the internet is in English, so people in countries like China, Japan, or Brazil, are actually left out from 70 to 80 percent of the internet. This is called the Language Divide. The magnitude of the language divide is actually pretty close to that of the digital divide. We bridge the Language Divide by using a translation engine that, in real time, translates the rendered contents into another language. So, one can say CNN in Chinese (e.g. Mandarin), the Intelligent Agent will then get the CNN English page contents and convert that into Chinese (e.g. Mandarin) in real time. Thus, users can listen to all the content on the internet.

So, Voice Internet is good for service providers who can provide many different voice services. It is also good for businesses and governments because they can provide special voice services that can be heard over any phone; and there's no need to re-write the content and create stand alone interactive voices response (IVR) systems. Today if you call a bank, for example, you have to answer four or five questions, and then you will listen to some content, but what Voice Internet technology does is that it moves the stand alone IVR systems into web based IVR systems. Thus, contents from any website can be provided to a computer or to a phone – no need to recreate stand alone IVR systems.

The other key benefit is significantly easing the accessibility. Why? Because accessibility today, and especially with Section 508, means to enable disabled people to access the information in a computer. That is good but very limited. Think about it. If we extend the accessibility to another 86 percent people who have phone but no computer, then we are talking about suddenly bringing information to a much larger population using a very simple product.

What are the challenges and the opportunities? The biggest challenge that we have had is dealing with the new market and new technology. As you know, dealing with just new market or just new technology, is easier than dealing with both. Thus, raising funds, building products, getting market acceptance, growing the market - all of them have been very difficult. However, overcoming such challenges brought lots of opportunities.

First, we have the market leadership with large market share. We are the market leader in this technology because we created it. Second, the return is going to be high because of the leadership and new enabling technology. Third, long-term sustainable business because of the leadership, new enabling technology which will enable several follow-up products, resulting a long-lasting industry.

The three things that I would like to request so that we can all work together and make it happen are the following policy steps:

1. Ensure a low, affordable calling rate when accessing the internet by phone

In many countries the telephone cost is very expensive. In the U.S. it's much less, but in many countries it is very high. In order to ensure that everyone can enjoy the benefits of the internet, we must make it affordable so that everyone can make a low cost phone call.

2. Make the voice internet available to all internet users.

Internet kiosks are great for computer access to the internet. By just adding telephones in the internet kiosks, many people who cannot use a computer will be able to access the same information just by making a phone call.

3. We must also make voice internet a part of computer training because many people drops out from computer training class as it is difficult for them to learn how to use computer or internet through a computer. Such people would find it much easier to learn and use the internet through a phone and by just talking and listening to the internet.

In conclusion, internet can be provided to everyone by using any phone and the user's voice, thus, truly bridging the digital and language divides, and we can use it to improve education, communication, and the economy worldwide.