

## Human Mind—will it Ever Conquer Time and Distance?

Naresh Kumar<sup>1\*</sup>

### ABSTRACT

The human mind is very innovative. It creates wonder by inventing to meet needs. Someone rightly said necessity is the mother of invention. With the need of communicating instantly, the human mind developed telephones, thus, conquering time and distance for the hearing sensation. But the further quest prompted it to conquer time and distance for the seeing sensation and we had video calling and live telecasts on TV. But the real conquering of time and distance by the human mind in totality will happen when it can devise ways and means to teleport sense of smelling, tasting, and touching so that the whole environment containing all five senses is brought in our close proximity from thousands of kilometers so that we can, not only, see and hear but also can enjoy the smell, taste, and touch. Thus, in the real sense, the incidents are brought to us eliminating the barrier of time and distance. For this to happen, the human mind has to advance the technology to ensure that the remaining senses of smell, taste, and touch reach us instantly from over thousands of kilometers -- we have already done it for sight and sound. Can the human mind do it?

**Keywords:** *Human Five Senses, Smell, Taste, And Touch, Teleporting, The Senses, Time and Distance, 9D TV*

If I tell you that I can smell a rose held in the hands of my daughter staying in the UK several thousand miles away from India where I reside; you will undoubtedly say, "It is impossible!" and that I am a mad person! Indeed, it is madness to even think like this as it is simply not possible currently.

Can she have the taste of "sambhar" (a south Indian pulse preparation) which we cooked here today; it is a doubly insane thought! How can the taste travel a thousand miles? Unthinkable!!

I am cuddling her two- year old daughter staying with her in the UK and not only feel her warmth but touching her is making me glad that I am blessing her, lifting her in my arms, and am playing with her here in India while she is with her parents in UK—a totally insane thought—I am totally out of my mind or probably am sound asleep and dreaming? Yes, it is possible in a dream but when I say, "No", I did it while I am awake; surely, I have gone mad and must be admitted to a mental asylum!

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<sup>1</sup>Independent Researcher, Baroda, Gujarat, India

\*[Responding Author](#)

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And if I ask whether can all these experiences happen instantly? i.e., as the action is done here, it is sensed at a long distance, it again is an incredible thought and only a fig of imagination!

The above imaginations relate to our three known senses—Smelling, Tasting, and Touching. These require that we must be in close proximity as these cannot overcome the barrier of distance and time.

As we all know that we perceive the world through our five senses- Seeing, Hearing, Smelling, Tasting, and Touching. God has given us the sense organs-eyes for seeing, ears for hearing, nose for smelling, tongue for tasting, and skin for touching. These organs pick up the sense impulse and send to the brain where these get processed and we enjoy the sensations. But all these require that we must work in close proximity i.e., there is a barrier of time & distance to get the sensations manifested and perceived by the human body.

I wish to take you back to the fifties when I was a child. In those days if we wanted to communicate to long distant relatives, then the convenient way was to use the telephone or we used to pen our thoughts on paper and prepare a letter and will put them in a post box after jotting down the address of the relative. Post-office will pick up the letter, transport it by trains and deliver it to our relative. If we go back in time a little backward before the telephone or wireless were invented; then the letter was the only means to talk to our near dear ones situated far-far away. There were no telegrams to convey urgent messages and we had to depend only on the Postal Service to talk to distant persons and that too after considerable time elapsed from the moment we wanted to talk.

Those were the times when it was impossible to think that we can instantly convey serious, urgent, and important messages which needed to be known to far distant people immediately. There were no facilities for telegram. Talking to our distant relatives instantaneously was simply impossible (no telephones then) and anybody thinking about it would have been considered insane in the same way as in current times our thoughts of smelling, tasting, and touching at distant places. People got the urgent messages only when the postman delivered the letter after many days. All activities had to be planned to keep in mind the long times needed for communications to reach destinations. Life was paced slowly because of the slow speed of communications. The current scenario of fast internets was not even dreamt and the fast life that we lead was unthinkable. We knew happenings at a place only after someone carried the news through the postal service so we knew incidents many days after they happened, today we know the happenings instantly. Life was too slow compared to the life that we lead now.

Thus, there was a barrier of time and distance and it was thought insane when a thought occurred whether could there be a way by which the communication, verbal or written, could be instantaneous. But this did happen with the advancement of science when the telephone and wireless were invented and information transfer was instantaneous both verbally as well as in written form. We could hear the voice instantly or read a message sent via telegram instantly. The information transfer had overcome the barrier of time and distance. Telephones made human sense of hearing overcome the barrier of time and distance. The thought that this was impossible then, was made possible by the human mind which was behind the technical development.

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But other human senses were still bound in chains of time and distances. To get the sensations of sight, taste, touch, and smell we had to personally travel long distances and reach the destinations i.e., we had to teleport ourselves instead of these senses getting teleported to us.

Time is flying and the miraculous human mind is expanding the horizons of science. From primitive ages when we were scared to witness thunderstorms and flashes of Lightning, we have come a long way. Thunderstorms or Lightning were not understood then and ignorance made them appear as the anger of supreme God. Ignorance breeds fear and we were fear struck when mother nature manifested Thunderstorm or Lightning. People, then, never knew the causes or conditions that caused these to happen, and these were termed paranormal. Science advanced through the enlightenment of the human mind and we were able to discover the factors which caused these phenomena. The human mind is never stagnant, it keeps on flickering and trying to achieve the impossible. History abounds in the feats which, then, thought impossible were, with the passage of time and with the inquisitive human mind, made possible.

In the age of communication only through postal letters, who could think that we could know instantly what is happening a thousand kilometers away at the moment. The human mind invented telephones and we were delighted to get a telephone connection after the telephone department laid the telephone lines and connected telephone instruments at our house. We were, then, enjoying the impossible feat of connecting to people a thousand kilometers away instantly as we could hear their voices. We could exchange incidents happening at our end and they could do the same from places more than a thousand kilometers away and that, too, instantly. Impossible made possible through the capabilities of the human mind.

However, we, then, could not see people at the other end of the telephone and, also, we could not reach people at places where phone lines were yet to be laid. The telephone booths were opened for the people who could not afford telephone connection at their homes and Telephone STD business thronged in societies all over the world where people could call people locally and also in other states through straight trunk dialling which got extended to international dialling through ISD's. The human mind was continuously finding solutions to human needs and making impossible possible.

The human needs never remain static and keep on continuously striving to go to higher planes. The need of connecting instantly through telephones had a limitation of laying telephone lines and connecting to the telephone instrument at home or at STD booth. The cumbersome activity of laying telephone lines was not only time taking and cumbersome but was also costly. The long distances to be covered needed long telephone lines and a lot of time was needed to connect places all over the world. The human mind was not happy with this and innovative as it is, it strived to do away with the telephonic lines and make our speech travel without the use of telephone wires.

The satellite era rushed in and we were freed from the chains of telephone wires. Who could then think that sound could travel without the telephone wires and we would be able to free ourselves from getting tied to the telephone instrument installed at our homes? We could not imagine that we could talk on the phone while moving on streets with an instrument which could be carried in our pockets. We entered the era of mobile phones.

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All we talked about was related to mind conquering time and distance in respect of sound which we hear. Thus, the sense of hearing broke the chain of time and distance and we could hear the sound generated many thousand kilometers away instantly. The mind had really conquered time and distance for hearing faculty.

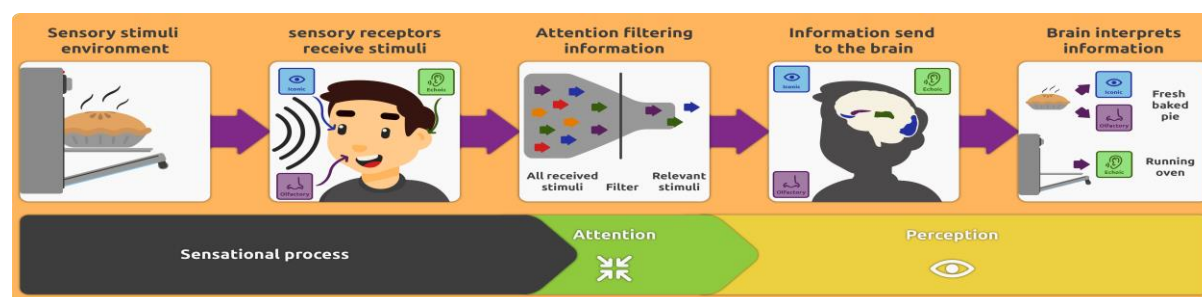
The same did happen even for seeing capability with human mind inventing television and we could see and hear things happening at long distant places. Another feat of conquering time and space for the sensation of seeing together with hearing which was conquered earlier. Television needed someone to telecast and it was received at long distances through the receiving gadget i.e., TV sets. But it was not possible to see our relatives while talking to them on phone but now we can even do that by doing video calling on mobile.

How was this made possible, how could sight and sound together be brought from thousands of kilometers away to our perception?

The first step would be to understand how the environmental stimuli of sight and sound emanate and travel to the receptor sense organs and how the other stimuli of smell, taste, and touch differ from them in this regard.

### *Let us look into these details*

If we have to examine whether smell, taste, and touch also can be teleported to us from long distances then the first step would be to understand how all senses travel to our brain where they get process. The following picture gives the routine process of perception of different senses to us.



The figure shows how we receive the stimuli which are in the environment through our sense organs and perceive through the process of perception in our brain.

For capturing time and distance for sight and speech, the mind could successfully devise the means (internet, satellite, mobile phones with video calling) to bring the location of sight and speech which we wanted to perceive in close proximity to our sensory organs eyes and ears and we could see and hear the acts being performed far-far away at long distances. When sight and audible speech could be transported from long distances why can't smell get transported? In fact, the human mind could devise to transport the whole environment consisting of sight, sound, smell, taste, and touch near to close proximity of the receiving person who is situated thousands of kilometers away from the stimuli generating environment. Then at long distances, we would not only see and hear the happenings but also would be able to perceive smell, taste, and touch the things from long distances. Only then truly, the human mind would have captures time and distance in an absolute way. How could this be done is a big question?

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At best, we could extend the logic and reasoning and suggest to extrapolate the ideas from real-life happenings of transporting of sight and speech. For this, we have to understand how the sensations of sight and sound reach our brain and compare them with the process of other senses reaching the brain. Do the processes have something common or all undergo a different process. A peep into this aspect will only give us a clue as to how we could teleport smell, taste, and touch as was possible for sight and sound.

Kumar Naresh (2020) in his book, “The Brain, Mind, Consciousness and the vital question-Who am I” gives details about how the sensations of all the five senses travel to the brain where these get processed to give us their respective perceptions:

### *The perception process part of seeing sensation reaching our eyes and then to brains*

As all of us know that vision starts with two small flat retinas located at the back of our eyes. The retinae initiate the process of seeing the world by responding to various wavelengths of light from the world around us. But it is just a beginning, a lot of activities happen in the brain where the data flowing from the retinae are processed by choosing what to retain and what to ignore and stitch together whatever is retained to construct the visual world. The process occurring in the brain for the perception of sight is very complex and science has made vast advances to understand different aspects of vision—colours, shapes, sizes, depth, etc. of the objects around us. We open our eyes and in a flicker of seconds the whole world is seen but behind this, an unimaginable amount of work is done by our brain to enable us to see the world.

Praveen Menon (2020) talks about the processing of vision in the brain-

### *Eyes as visual sensors*

- The retina is a sheet of cells at the back of each of our eyes. Some of these cells, called photoreceptors, are sensitive to light. There are two main types: **rods** and **cones**--rods are sensitive to light-dark differences and cones are sensitive to colour.
- These photoreceptors are most densely packed together in a small area at the centre of the retina called the fovea. It corresponds to the centre of our vision, where resolution is at its highest. Detail progressively decreases for distances further from the centre of our visual field – that is, in the periphery (hence "peripheral vision").
- As we look around our environment, we move our eyes. This enables us to orient the fovea toward what we're most interested in within the vicinity."

From the retina, there are two pathways (old and new pathways) by which visual information enters the cortex where vision processing takes place.

We shall move on to the travel process to the brain of other sensations before we start analysing and comparing them. So, moving to Sensation of Hearing:

### *The perception process part of hearing sensation reaching our ears and then to brains:*

- The generation of sound and how it travels is described in the article-How do we make the sound ([voicescienceworks.org/how-we-make-sound.html](http://voicescienceworks.org/how-we-make-sound.html))
- Sound is a type of energy made by vibrations. When any object vibrates, it causes movement in the air particles. These particles bump into the particles close to them, which makes them vibrate too, causing them to bump into more air particles. This movement, called sound waves, keeps going until they run out of energy. If your ear is within range of the vibrations, you hear the sound. (-[www.sciencekidsathome.com](http://www.sciencekidsathome.com))

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- The sound waves travel away from the source of interruption like wave ripples in the water and can be defined as the number of airflow interruptions that happen each second. We consider a note to have a low pitch in the air if the airflow is interrupted less frequently each second.
- We consider a note to have a **high pitch** if the airflow is interrupted **more frequently** each second
- This is where we get the term **frequency** to describe pitch. Pitch is determined by how often or how frequently the air molecules are displaced and then come back to their original position.
- Frequency is measured in Hertz or Hz.  
*Hz= the number of cycles per second. A cycle is how long it takes air to come back to its original spot before it was interrupted.*

### *How do we create sound with our voices?*

The vocal folds sit at the top of the airway. During exhalation the vocal folds come together and vibrate, interrupting the airflow. **However, many times the folds vibrate per second is the pitch being sung.**

*Example: If the vocal folds vibrate 500 times per second, the airflow is being interrupted 500 times per second and the pitch is 500 Hz*

The sound waves created by interrupted air flows travel as longitudinal waves and strike our eardrums which are connected to three small bones. The vibrations in the air make the eardrum vibrate, and these vibrations are passed through the three small bones (called ossicles) to a spiral structure called the cochlea. Signals are passed from the cochlea to the brain through the auditory nerve, and our brain interprets these signals as sound.

Thus, the vibrations in the air which travel like longitudinal waves make sound travel to the hearing sense organ and from there on the signals pass to the brain where the processing of hearing takes place and we are able to hear.

Thus, both sensations i.e, of seeing and hearing travel like waves-light waves and sound waves, and the receptor sense organs eyes and ears catch the signals contained in the waves and the sensations manifest after the brain processes them.

How does the sensation of "Smell" travel and reach the brain through sense receptor-the nose?

### *The perception process part of smelling sensation reaching our nose and then to the brain*

The smell is a very direct sense. For you to smell something, molecules from that thing have to make it to your nose. Everything you smell, therefore, is giving off molecules -- whether it is bread in the bakery, onions, perfume, a piece of fruit, or whatever. Those molecules are generally light, volatile (easy to evaporate) chemicals that float through the air into your nose. A piece of steel has no smell because nothing evaporates from it -- steel is a non-volatile solid.

At the top of your nasal passages behind your nose, there is a patch of special neurons about the size of a postage stamp. These neurons are unique in that they are out in the open where they can come into contact with the air. They have hair-like projections called cilia that

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increase their surface area. An odor molecule binds to these cilia to trigger the neuron and cause you to perceive a smell. According to the book *Molecular Biology of the Cell*: Humans can distinguish more than 10,000 different smells (odorants), which are detected by specialized olfactory receptor neurons lining the nose... It is thought that there are hundreds of different olfactory receptors, each encoded by a different gene and each recognizing different odorants. (Source: How does the sense of smell work? - health.howstuffworks.com/mental-health/human-nature/perception/question139.htm)

There is a difference between the smell sensation travelling method and those of seeing and hearing sensations. While the latter travelled like waves and were captured in the sense organs, smell travels in the air –the air current carrying the molecules or odour reaches the smell sense organ-nose, and there on the processing of smell starts.

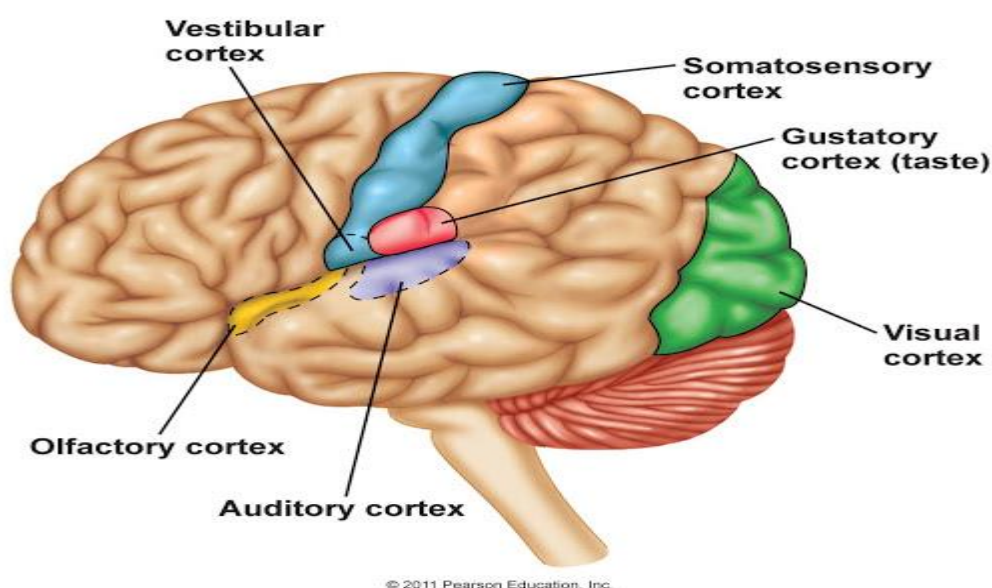
Could the specific portion of air containing the odour molecules be converted into digital form and teleported similarly as sight and sound got teleported? Before we attempt an answer, let us first look at other senses-taste and touch-how these reach the sense organs tongues, and skin from where these get relayed to the brain where the processing gives us realization of taste and touch.

### *The perception process part of tasting sensation reaching our tongues and then to the brain*

For the tasting, we have to keep the article to be tasted on our tongues and then the tongue acts as a receptor organ for a taste sensation and sense impulses to the brain for processing and for the final sensation experience of the taste.

In an article by *Stone Brooke University (2020) –Re-mapping taste in the brain, the process of* taste sensation triggered by brain parts is described as follows:

"When we taste the food, neural activity propagates from the tongue to the brainstem and up to the cerebral cortex region known as the gustatory cortex (see Figure below).



*Figure: showing different cortex in the brain where different sensory perception processing happens*

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Activation of the gustatory cortex contributes to our perception of taste and flavor. Early imaging experiments provided evidence in favor of the theory of taste coding that postulates the existence of spatially localized clusters of neurons encoding specific tastes. These clusters, also known as "hot spots" form a map of taste on the **gustatory cortex**, with a hot spot for "sweet," one for "bitter," one for "salty," and one for "savory." According to this model of taste function, the activation of one cluster would correspond to the sensation of a specific taste.

Unlike sensations of sight sound or smell where these sensations travel either through the waves or through the air, the sensation of taste happens differently. Here the article to be tasted is to be brought in contact with the sense organ tongue manually.

The same would be the case with the sensation of touch where the thing to be touched is to be brought in contact with the sense organ for touch-the skin.

### *The perception process part of touching sensation reaching our skins and then to the brain -----*

Guro E. Løseth, Dan-Mikael Ellingson, and Siri Leknes offer the following details about touch sensation which emanate from the skin when someone or something touches our body and signals go-to brain :

Touch and pain are aspects of the **somatosensory system** (see above Figure), which provides our brain with information about our own body and properties of the immediate external world. We have somatosensory receptors located all over the body, from the surface of our skin to the depth of our joints. The touch information is sent to the central nervous system through **cutaneous senses** (senses of the skin),

The skin can convey many sensations, such as the biting cold of wind, the comfortable pressure of a hand holding yours, or the irritating itch from a woolen scarf. The different types of information activate specific receptors that convert the stimulation of the skin to electrical nerve impulses, a process called **transduction**. There are three main groups of receptors in our skin: mechanoreceptors, responding to mechanical stimuli, such as stroking, stretching, or vibration of the skin; **thermo-receptors**, responding to cold or hot temperatures; and chemoreceptors, responding to certain types of chemicals either applied externally or released within the skin (such as histamine from an inflammation)."

Interconnection of skin to the circuitry of the brain as discussed above provides a sensation of touch.

In the above paragraphs, we captured the part of sensation processing of all five senses up to the point that the senses travel to the sense organs, which is pertinent to our topic. Readers wanting to learn complete sensation processing from the receipt of sensation signals to the sense organs, processing in brains and final manifestation of sensations are invited to go through my book, "The brain, mind, consciousness, and the vital question -who am I available on Amazon worldwide and even on Google Book store.

We saw that converting the light and sound waves to digital form and teleporting to long distances instantaneously was made possible by technology and we can see and hear at long distances instantaneously. The sight and sound were brought to long distant people by transferring them through broadcasting. As per Wikipedia, all broadcasting was composed



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of analog signals using analog transmission techniques but in the 2000s, broadcasters have switched to digital signals using digital transmission.

Television broadcasting (telecast), began experimentally in 1925, & commercially from the 1930s: an extension of radio to include video signals.

Cable radio (also called "cable FM", from 1928) and cable television (from 1932): both via coaxial cable, originally serving principally as transmission media for programming produced at either radio or television stations, but later expanding into a broad universe of cable-originated channels.

Direct-broadcast satellite (DBS) (from c. 1974) and satellite radio (from c. 1990): meant for direct-to-home broadcast programming (as opposed to studio network uplinks and downlinks), provides a mix of traditional radio or television broadcast programming, or both, with dedicated satellite radio programming.

The broadcasting was to make a large number of viewers see and hear the happenings at some far distant place. Time and distance were, thus, captured by connecting several distant people to incidents happening far-2 away instantly. But we were still far away to connect to and see people whom we intended to see and talk to. Telephones were there but we could not see the people to whom we were talking and telephones could not be carried along so people had to come to the instrument and then talk.

Then came the era of mobile phones which freed people from sticking to telephone instruments and they could, in fact, carry the instrument in their pocket and talk as and when they felt like talking -but still they were not able to see the people to whom they were talking.

### *Communication through mobile was made possible by technological advancement*

Tyler Lacoma (2020) explains the working of mobile phones:

Cell phones use radio frequencies to send and receive information that is translated into sound. At any given time while in use, the mobile phone is sending information on at least two different frequencies, one for sending information and one for receiving it.

In the beginning, mobile phones used two whole frequencies for conversations. However, as the number of mobile phone users grew, the providers realized they would soon run out of frequencies, so digital signals were introduced.

This stage was limited only to send sound and hence only talking was possible but we could still not see the people to whom we were talking to.

This has been made possible, now, with technological advancement into Videotelephony.

**Videotelephony** comprises the technologies for the reception and transmission of audio-video signals by users in different locations, for communication between people in real-time. A videophone is a telephone with a video display, capable of simultaneous video and audio for communication between people in real-time. Videoconferencing implies the use of this technology for a group or organizational meeting rather than for individuals, in a videoconference. Telepresence may refer either to a high-quality videotelephony system (where the goal is to create the illusion that remote participants are in the same room) or to meetup technology, which goes beyond video into robotics (such as moving around the

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room or physically manipulating objects). Videoconferencing has also been called "visual collaboration" and is a type of groupware.

Videotelephony included "image phones" which would exchange still images between units every few seconds over conventional plain old telephone service (POTS) lines, essentially the same as slow-scan TV. The development of advanced video codecs, more powerful CPUs, and high-bandwidth Internet telecommunication services in the late 1990s allowed videophones to provide high-quality low-cost colour service between users in almost any place in the world where the Internet is available.

Practical digital videotelephony was made possible only with advances in video compression, due to the impractically high bandwidth requirements of uncompressed video. To achieve Video Graphics Array (VGA) quality video (480p resolution and 256 colors) with raw uncompressed video, it would require a bandwidth of over 92 Mbps. The most important compression technique that enabled practical digital videotelephony and video conferencing is the discrete cosine transform (DCT). The DCT, a form of lossy compression, was conceived in 1972 by Nasir Ahmed, who developed the algorithm with T. Natarajan and K. R. Rao at the University of Texas in 1973. The DCT algorithm became the basis for the first practical video coding standard that was useful for online video conferencing, H.261, standardised by the ITU-T in 1988, and subsequent H.26x video coding standards.

In the 1980s, digital telephony transmission networks became possible, such as with ISDN networks, assuring a minimum bit rate (usually 128 kilobits/s) for compressed video and audio transmission. During this time, there was also research into other forms of digital video and audio communication. Many of these technologies, such as the Media space, are not as widely used today as videoconferencing but were still an important area of research. The first dedicated systems started to appear as ISDN networks were expanding throughout the world. One of the first commercial videoconferencing systems sold to companies came from PictureTel Corp., which had an initial public offering in November 1984.

The Kyocera VP-210 Visual Phone was the first commercial mobile videophone (1999). Videotelephony was popularized in the 2000s, via free Internet services such as Skype and iChat, web plugins supporting H.26x video standards, and on-line telecommunication programs that promoted low cost, albeit lower quality, videoconferencing to virtually every location with an Internet connection.

With the rapid improvements and popularity of the Internet, videotelephony has become widespread through the deployment of video-enabled mobile phones such as 2010's iPhone 4, Webcams are popular, relatively low-cost devices that can provide live video and audio streams via personal computers, and can be used with many software clients for both video calls and videoconferencing.

Videophones—low to midrange cost. The earliest standalone models operated over either plain old telephone service (POTS) lines on the PSTN telephone networks or more expensive ISDN lines, while newer models have largely migrated to Internet protocol line service for higher image resolutions and sound quality. Quality of service for standalone videophones can vary from low to high.

(source [Wikipedia en.wikipedia.org/wiki/Videotelephony](http://Wikipedia.en.wikipedia.org/wiki/Videotelephony))

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Thus, live moving pictures together with the accompanying sound could give an illusory presence of people moving and talking to us from a far distance as if they were in our near proximity and the sight and hearing of them could be perceived by our brain. This made us feel their presence near us.

Could we not similarly encode smell, taste, and touch situated at long distance and decode it in our near proximity to make us feel these sensations happening near us? We have done it for the senses of seeing and hearing. We have really conquered time and distance with respect to sight and sound. We could make the sound and sight manifest at long distances without the need for travel of people physically. The Human Mind could make science and technology advance to make these seemingly impossible events a reality.

The human mind is blessed with unlimited potential and it will make further advancement in science and technology and we shall be able to feel the touch, shall be able to smell and shall be able to taste while sitting miles apart. This will be made possible as it was made possible to see and hear at long distances. Then only we shall be able to say with pride that Mind has conquered time and distance in all respects and we would have got an affirmative answer to the topic of this paper.

Will it be possible and how? This is what we shall be discussing in the coming paragraphs. We have come a long way and the impossibility of instant perception of sight and speech was made possible with the invention of the internet, satellites, and mobile phones. The human mind conquered time and space for sensations of seeing and hearing by devising ways and means by bringing the sight and speech which was separated by us by long distances to our close proximity from where our sensory organs for seeing (the eyes) and sensory organs for hearing (the ears) could capture the respective stimuli which got routinely processed in our brain.

But the technology is yet to advance to make it happen for the sensations of smelling, tasting, and touching. It is thinkable that since smell travels through a medium i.e., air; it may become possible to somehow convert it to digital format and do teleportation but it seems difficult for the sensation of taste and touch where manual intervention is needed and there is no medium for their travel.

Still, the mind with its innovative nature will certainly find a way. In fact, there is literature available where 9D television is being developed which will transmit all five senses instantaneously to long distant destinations:

Richard Gray (2015) mentions in his article:

*Researchers are developing ways of generating emotions through the sense of touch, smell, and taste that could lead to what the designers are calling 9D TV.*

*The researchers are developing an Ultrahaptics device to trigger emotional responses by simulating a touch of the hand or a brush of fingers against the skin. While current cutting-edge 3D TVs help turn flat images into an experience that has depth and distance, it is often not enough to create truly compelling viewing, explained the researchers. Instead, the team based at the University of Sussex in Brighton is developing a system that uses bursts of air to stimulate different parts of the hand.*

*Separate regions of the hand have been linked with generating certain emotions although the emotion triggered can depend on the location and force of the touch,*

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*For example-The device being developed in Brighton, built by electronics firm Ultrahaptics, takes advantage of this research to touch hands in a way that conveys a range of emotions from happiness and sadness to excitement or fear.*

*It works by using ultrasound speakers to produce a flow of air that can be transmitted to a person's skin. By using short sharp bursts of air to the area around the thumb, index finger, and middle part of the palm to generate excitement, for example, to create sad feelings, the air is used to create a slow and moderate stimulation of the outer palm and the area around it.*

*The group is now starting to develop a similar technology that exploits our sense of smell and taste.*

*The result would be a 9D TV that combines vision, sound, touch, smell, and the four tastes - sweet, salty, sour, and bitter.*

*Dr. Marianna Obrist, who led the work at the department of informatics at the University of Sussex, said combined together they could bring all of our senses into the experience of watching television.*

*Early research by her team has shown that taste can be used to convey certain experiences. Participants in a trial study experienced sweet tastes as being 'smooth' or 'round' while sour was spikier.*

*Similarly, her group found it could establish 'smell stories' for participants by finding smells they associated with particular experiences.*

*There are already some technologies that attempt to manipulate the sense of taste and smell, such as electrically stimulating the tongue or releasing perfumes to replicate certain smells.*

*She said: 'Relatively soon, we may be able to realise truly compelling and multi-faceted media experiences, such as nine-dimensional TV, or computer games that evoke emotions through taste.'*

Fantastic!! Unbelievable!! Incredible!! Isn't it?

It is mind-boggling to observe the infinite capacity of the human mind. Innovativeness beyond compare!! The 9D TV may come into existence in near future and then we could have a feel of the whole environment a thousand kilometers away. The environment will bring all five sensations which will be embedded in it. Through 9D TV, we shall not see and hear from long distances, but would also be able to sense the smell, taste, and touch from long distances. While these sensations will be from a specific long-distance area to people situated at different places as is usual in a TV broadcast. But soon it will become one-to-one as is with video calling by mobile phones.

A long time might be taken to invent the 9D TV but the transition from TV to mobile will be quick and easy.

So, we may look forward, in near future, to receive not only sight and sound but the sensations of smell, touch, and taste through our mobiles—may be the name of mobile may fetch another name. Whatever the name, we shall be able to bring the near dear distant persons in close proximities of our sense organs to have a feel of all five sensations.

***Truly then, the human mind would have conquered time and distance!!...***

I had mentioned in some earlier paragraphs that there are two ways by which the human mind could capture time and distance—the first alternative we discussed above and found

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that we are nearing our goal and soon with the invention of 9DTV we would have accomplished the impossible feat.

The other alternative, as discussed, was to teleport ourselves to the distant environment so that we reach proximity to have all five sensations. This aspect is being studied under the field of Parapsychology---Clairvoyance, Remote viewing, or Out of Body experiences. These experiences teleport the person to a long distant location to have a physical perception of long-distance objects.

The causal research to understand the phenomena is in infancy—details can be had in my book-“Parapsychology -Trending towards Causal Research”.

This approach is not likely to make much headway in near future but the 9D TV will certainly happen and will take us to a handheld device like mobile phones by which we shall be able to experience all five senses from thousand kilometers.

***We look forward to seeing the human mind conquering time and distance by bringing all five sensations from thousand kilometers to us through hand-held devices like mobile phones.***

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The author declared no conflict of interest.

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