A Primer on V2K vs. Mind-Reading Technologies

By Anthony Forwood

Is Mind-Reading Technology Real?

Many people suspect or believe that their thoughts are being read by mind-control technologies. Many of these people are already targets of 'Voice to Skull' (V2K) technology, with which the perpetrators are able to project sounds and voices into their head, and because of what the perps communicate to them in this way, they are often led to believe that the perpetrators are able to read their thoughts as well.

Beyond the fact that many of these people suffer the very real effects of V2K, what makes them come to this conclusion? Is there any scientific evidence that would reveal that actual mind-reading technologies are possible, and if so, to what extent? Can these people's experiences of the apparent reading of their thoughts be otherwise explained in more practical terms?

Although I've never knowingly been the target by any similar sort of electronic weapons myself (other than the usual mass media), I decided to investigate this. I have carefully researched as much of the available documentation as I can find, paying particular attention to actual mind-reading capabilities, as well as examining the published stories of many who claim to be victims of these technologies. On the one hand, what I've learned is somewhat reassuring (as far as thought-reading goes), but on the other hand, it's not, because it reveals that there are many people out there who seem to be misinformed (not entirely their own fault), or who might actually *want* to be seen as victims in this capacity, for whatever reason. I don't mean to criticize those people who actually suffer the very real invasive effects of mind-control technologies, but it's very important to clear up any misunderstandings that they might have, so that they can better understand the reality of their own situation so as not to be taken by others as delusional, and so that they can make informed decisions about how to defend themselves against their perpetrators. My intention here is to provide an overview of the technologies that *do* exist, with a fairly extensive explanation of the science behind them, which will reveal both their capabilities and their limitations. This document will provide the reader with information that is more detailed and accurate than what is otherwise offered in any documents I have come across that describe mind-control technologies.

So, What is True?

V2K is an established technology, based on Allen Frey's discovery (first publicly reported in 1961) that pulsed microwaves can be used to cause intercranial sounds (sounds that can only be heard inside a person's head).[i] This method relies on specific energy levels, frequencies, and modulations (wave patterns). It's a brute force method, where the target's head is bombarded with the microwave pulses. These pulses cause rapid heating and cooling of the tissue cells of the inner ear, causing them to rapidly expand and contract, and this translates into sound vibrations that affect the cochlea, which triggers the appropriate neurons to fire, transmitting a signal to the auditory cortex. There is no direct effect on brainwaves from these microwave pulses, and there is no possibility for two-way transmission.

Any electronic technology that might be created to remotely read a person's thoughts will entail a much more complicated procedure than that used for V2K, for several reasons.

First, there is the fact that the brain's natural electromagnetic signals are extremely weak (approx. 0.5 milliwatts), which means that they aren't able to propagate very far at all before they become lost among the noise of all the other electromagnetic activity that is always present in the surrounding environment. But even before they can reach even a few millimeters, they're obscured by tissue and bone. Traditionally, electrodes that are applied directly to the outer scalp have been used to pick up these weak brainwaves, but this obviously won't do for covert mind-control applications. Surgically implanted electronic implants can substitute for these electrodes, since they can be designed to amplify brainwave signals before retransmitting them.[ii] But even still, although it's conceivable that a person might have been electronically implanted for mind-reading purposes with or without their knowing it, there are still many factors involved that impose further limitations in retrieving and deciphering brainwave signals, and understanding these will show that what many people are reporting as mind-reading is not the case, and one of several other mind-control methods are more likely involved

But there are other, more compelling reasons why reading a person's thoughts is far more difficult than it is to project voices into their heads through the brute force of V2K. Understanding brainwave patterns well enough to translate them into anything resembling actual thoughts is a great deal more difficult, since the complexities of these brainwave patterns parallel the complexities of the brain itself, and an understanding of the one directly reflects an understanding of the other. The workings of the brain are still barely understood, but one thing that *is* understood is that many different areas of the brain are involved in even the simplest mental activity.

If you've ever seen color photographs of brain activity taken from an MRI (magnetic resonance imaging) machine, you'll understand that different areas of the brain 'light up' to different degrees at different times for different lengths of time and in different sequences for every different type of mental activity. It might be simple enough using something like MRI imaging to determine when someone is thinking word-thoughts because the 'Broca's Brain' or 'Wernicke' areas light up, but this reveals nothing about *what* they are thinking. There is obviously more involved in decoding the actual words that are being thought, and brain activity has to be considered in three-dimensional terms, which poses further limitations.

Added to all of this is the fact that each person's brain activity is slightly different, due to both the variations in neural configurations from person to person and the variables involved in the mental expressions that make up our thoughts. Therefore, it's wrong to assume that it's just a matter of deciphering the brainwave patterns from one person and being able to apply them to anyone else to understand what they're thinking. Each person will require a separate dictionary for interpreting their brainwave signals into actual thoughts.

The patterns of brain activity are therefore very complex, being both spatial and temporal in nature, requiring any analysis of these patterns to take into consideration the three-dimensional expressions that occur in a particular sequence over a period of milliseconds or longer. There is no purely linear means of reading brainwaves and understanding their respective meaning. It will make a huge difference in how the brainwave signals are received (what their four-dimensional temporal/spatial patterning is) depending on the position of the target's head in relation to any external reading device, making reading someone's linear thoughts that much more difficult (unless an array of stationary implants or external

electrodes are involved). Just the simple movement of the head would upset the reading, if it were being done remotely.

The electromagnetic field around the brain, which is created by the brain's activity, is a complex field of interference patterns, where the radiating electromagnetic waves arising from the different areas of the brain are interfering with each other in different ways depending on their frequencies, relative positions, and sequential occurrences, so that it might be compared to a visual hologram, where viewing it from different angles results in a slightly different image. Only those brainwave emissions that are traveling more or less in the direction of the remote receiving equipment and not being interfered with by other brainwave emissions would be able to be properly read. As stated earlier, there is an added problem in that the dense bone tissue of the cranium interferes with brainwave emissions by deflecting and deforming them, making it even more difficult to determine the precise area of the brain that emitted a particular signal. This makes mind-reading technology without the use of implants highly unlikely, as far as reading your actual thoughts go. An implant will always be stationary in relation to the brain and will pick up the electromagnetic emissions from a single point of reference, making the monitoring of specific brain areas that much simpler. However, implants would still have to be precisely located where they can properly detect the desired brainwave emissions. It is impossible for a single implant to detect all of the brainwave activity that comprises a thought. Many implants are required for this, as will be explained further on.

More on Brainwaves and Brain Structure

All thoughts create brainwaves, which are electromagnetic waves that carry certain patterns based on frequencies and modulations, and these patterns are specific to the brain activity that is occurring. Human brainwaves are within a very narrow bandwidth of frequencies – the dominant ones are between 0.5 – 30 Hz, with more subtle frequencies reaching up to about 300 Hz. The information they carry is contained in the modulation of these frequencies. Modulation is simply the effect of combined frequencies, which causes specific changes in the up and down patterns of an otherwise uniform wave, and the specific pattern depends on the combination of frequencies involved, and their duration. Amplitude is the strength of the wave, which is measured by the distance between the highest and lowest points of a wave pattern (the peaks and troughs). Since brainwaves are very weak, their amplitude is very small.

The key to deciphering a person's thoughts (or any other brain activity) from their brainwave patterns is to understand how the modulation pattern of brainwave emissions relates to specific brain activity. Some brainwave activity will be easier to decipher than others, since some types of brain activity is more similar to all of us than other types. Naturally, this is reflected by the similarity in how our brains are structured and operate. There are three distinct stages of brain evolution that become slightly more varied between individuals in regard to the neural structure of each newer stage, due to our individual genetic makeup, learning experiences, mental habits, and physical development. The earliest stage to have evolved, known as the R-complex or 'reptilian brain', will be almost identical between all individuals, while the most recently evolved stage, the neocortex, which is far more adaptive and able to reconfigure its structure and functionality over time (due to our individual experiential development and tendencies in how we think), will have the most variation between each person. The middle stage, centered around the limbic system and physically located between the R-complex at the brain's core and the neocortex that covers the outer surface, is more or less identical for all of us as well, but will still have some minor variations from person to person.

The R-complex deals with the deepest, most necessary brain functions for our survival, and is guided by instinct. The limbic system is the center of emotion. The neocortex is the area of the brain that has the most to do with our thinking and determines our greatest uniqueness as both a species and as individuals of the human species. As such, our individual styles of thought will be reflected in the configuration of its neurons. The neocortex is also the most 'plastic' of the three stages, which means that it is more susceptible to reconfiguring its neural connections over time as we change and grow and develop new mental habits, etc. This may be our saving grace, as far as mind-reading technologies go. Also is the fact that each brain is different in the size and shape of its many sub-structures. So, just like fingerprints, which have certain similarities but are always uniquely different through minor variations, no two brains are exactly the same either.

Mind-reading technologies depend on deciphering the patterns of our brainwaves created by our brain activity. Some patterns, such as those created by emotions, are more or less identical for everybody, while other patterns, such as 'word-thoughts', will have a certain level of variation in their patterning from person to person, as well as in the manner of their tone, rhythm, and inflection. Therefore, the brainwave patterns of emotions and emotional states would be fairly easy to decipher no matter who is being targeted. Moving to the higher brain functions encompassed by the neocortex and the more complex inherent differences from person to person in their individual neural structures and the resultant difference in their brain activity, deciphering brainwave patterns becomes that much more difficult. Simply put, our emotions and other lower-level brain activity and corresponding neural configurations are going to be more or less identical for everybody, while higher-level brain activity and corresponding neural configurations are going to be more unique to each of us.

With all this said, it should be more understandable that our full-blown word-thoughts (the words we hear ourselves thinking in our heads) are going to be harder to decipher. Each person will have differences in their brainwave patterns due to the differences in the development of their neural structures.

Even though the brainwave pattern for a specific word-thought might be similar for everybody to a certain degree, the corresponding brain activity is still going to be unique enough that for each person targeted for mind-reading purposes, it would first have to be analyzed and broken down into its unique 'signature' patterns, and there won't necessarily be a single signature pattern for specific words that will apply to everybody (whereas with emotions and other lower-level brain activity, there will). These signature patterns will also be made more complex by such things as the variations in mental expression (tone, rhythm, inflection, etc.), the rhythms of various physical functions (such as blood flow, respiration levels, heartbeat, etc.), etc. Some or all of these things would need to be taken into consideration in real-time while monitoring a person's brainwaves (at least early on during a 'learning' phase of the mind-reading technology), since they will all have some effect on the patterning of electromagnetic output.

The connotation of words is important in understanding what is being communicated, meaning that tone, rhythm, and inflection are as crucial as the words themselves. Even in our thoughts, the connotation of words plays a role in expressing ourselves. Without knowing the connotation, sarcasm might be taken seriously by anyone eavesdropping on our thoughts. This means that they will want to be able to differentiate, and this will require greater complexity in any mind-reading technologies than just learning the brainwave patterns of words.

The areas of the brain that are involved in language processing are varied in their specific functions, and are spread out in the brain matrix rather than all centered in the same general location. This means that each of them would need to be tapped for mind-reading technologies to be effective. With there being approximately 100 billion neurons in the human brain, where each of these neurons has a specific function that may be totally unrelated to any of those adjacent to it, picking out the right neurons to read specific signals is no easy task. Being even one neuron off could totally corrupt any meaningful signal.

You should be able to understand from all this that reading a person's thoughts by monitoring their brain activity and deciphering brainwave patterns isn't as easy as might be imagined. Determining your emotional state and certain other specific lower-level brain activity by reading your brainwaves might be one thing, but determining the actual words you're thinking is quite another. And because we're all somewhat different in our higher-level brain structuring, it isn't possible to establish a general database of word-patterns that will apply to everyone. Each person would require a separate database for their unique signature word-patterns (or even syllabic or phonetic patterns), and to create this database, each word-pattern would first have to be learned over time through repetition, comparing, and averaging out the results into a single recognizable pattern for each word. This learning period would require knowing precisely when the person is thinking a specific word while recording their brainwave activity, and filtering out everything but those brainwave patterns that relate to those thoughts (such as emotional overlays, lower-stage activity related to physiological functioning, etc.). Only after a relatively large number of recordings of a specific word have been made and compared, would it be possible to determine the underlying word pattern within the more complex brainwave output.

A Review of the Current Technologies and the Science Involved

At this point, it would be a good idea to review the relevant technologies that are known to exist, and consider their inherent capabilities and limitations.

The Frey Effect

As I related earlier, a scientist named Allen Frey published a report in 1961 that revealed that pulsed microwaves transmitted towards a person at certain specific frequencies and modulations would induce buzzing and clicking sounds that could be heard intercranially (inside their head) but not externally. This effect was found to be stimulated by the rapid heating and cooling of brain cells, which causes the cells to expand and contract, and this effect is detected by the cochlea and translated into sound patterns that are then delivered to the auditory cortex. It was determined that short bursts of these pulses could be modulated to simulate voices and other sounds.

Although this effect allows for beaming voices and sounds into a person's head, it is strictly a one-way transmission and doesn't provide any means at all for reading a person's mental activity (two-way transmission).

EEGs

Electroencephalography (EEG) machines are able to read a person's brainwave activity through electrodes placed across the surface of the scalp. The number of electrodes used determines the overall spatial resolution of the signal. A minimal array consists of 19 specifically placed electrodes, while a high density array can have as many as 256 electrodes

evenly spaced across the surface of the scalp. Readings consist of the differences in voltage between pairs of electrodes, known as a montage. There are various ways that a montage might determine brainwave activity, with each of these revealing different types of information. With digitized recordings, these different montages can be analyzed from the same recorded data, based on different mathematical formulas.

There are four basic frequency ranges of brainwaves, which reflect various mental states, going from the lowest, which relates to deep comatose sleep, to the highest, which relates to wide-awake alertness.

Delta (0.5 – 4 Hz) - Deep comatose (dreamless) sleep
Theta (4 – 7 Hz) - Dream (REM) sleep, hypnotic state, super-learning mode
Alpha (7 – 13 Hz) - Relaxed, drowsy state (creativity)

Beta (13 – 30 Hz) - Wide-awake, alert state

Although one of these states will be dominant over the others at any particular time, all of them will always be present to some degree. This means that the brain is always emitting these various different frequencies to different degrees in different areas within its three-dimensional matrix, and these areas and the frequencies they emit can change over time, depending on changes in the mental state.

A fifth frequency range, known as the gamma range (30 – 100+ Hz), has also been found that reflects special mental functioning that isn't common in all people. It has been found to relate to advanced meditative states and highly elevated states of consciousness. There is no 'gamma state' of the brain, as there are for the four basic frequency ranges (the gamma range never dominates over the others), although the gamma range is present when a person is awake, and is integral to their mental state.

Two further classifications of brainwaves have also been discovered, known as lambda and epsilon waves. They are correlated, and while the epsilon wave is very low in frequency (below 0.5 Hz), the lambda wave is very high (100 – 200 Hz). Lambda waves can be found within the patterns of epsilon waves. These types of brainwaves are only mentioned here for posterity, and have no further bearing on our discussion.

Of the four dominant brain states, beta waves have the highest frequency but a relatively low amplitude, and each of the other states have respectively lower frequencies and higher amplitudes, with delta having the highest amplitude of all.

EEG readings rely on the electric potentials generated by a very large number of neurons that have a similar spatial orientation (i.e. neural clusters). The neocortex is the part of the brain that is closest to the scalp, and because its neurons are well-aligned and fire together, it's believed to be the source of the EEG signal. The brainwaves from deeper areas of the brain matrix are too weak to be detected in this way. Further inhibitors to brainwave detection are cerebrospinal fluid and the hard bone tissue of the skull, which cause smearing of the EEG signals. This makes accurate distinctions of signals from different areas of the brain matrix somewhat difficult, if not impossible, using EEG machines.

EEGs allow for readings with a high temporal resolution in the range of milliseconds (in comparison, action potentials in the brain take as long as 130 milliseconds to propagate from one neuron to the next), making them very useful for monitoring ongoing brain activity in relation to various stimuli and corresponding brain functions. However, EEG readings are very

limited in their spatial resolution, and it's mathematically impossible to reconstruct an intercranial electrical current source (the specific neural structures) for a given EEG signal.

Note – Theta waves are particularly interesting, in that they have been found to correspond to repression of a response or action, as well as relating to automated tasks where conscious attention is not necessary. This is important to understand in relation to how mind-control technologies might induce certain effects or avoid conscious resistance to their influence.

The P300 Signal

The P300 signal is an EEG signal (30-50 Hz, 0.5 milliwatts) that can be read from the scalp using electrodes, most significantly in the area of the parietal cortex. The P300 signal reflects a person's brain activity in a way that allows it to be decoded to some extent. The signal arises as an 'evoked potential' that appears as a small spike in a normal EEG readout, and these evoked potentials carry the encoded signature patterns that relate to such things as emotional states, stimulus responses, motor commands, auditory events, visual imagery, intentions, and even the word-thoughts that arise in a person's brain. The evoked potentials of the P300 signal are derived from the organized temporal/spatial activity of different areas of the brain – there is no one specific place in the brain that elicits any particular P300 signal. This is important to understand when considering how mind-control technologies might read or influence brain activity.

Note: It shouldn't be assumed that the P300 signal can be read from a single point anywhere on the scalp, but instead requires the overall array of electrodes that was described earlier, incorporating the combined signals from these electrodes, which are placed at various points across the scalp. Decoding the P300 signal from these combined readings requires the application of certain mathematical formulas called 'Fourier transforms', which will be explained further on.

The P300 signal far more readily allows for the detection of emotional states, etc., than it does for the reading (and understanding) of actual word-thoughts. As I said earlier, certain types of lower-level brain activity, such as emotional states, are more similar between individuals than is higher-level brain activity, such as word-thoughts. This is due to the greater differences in higher-level neural structuring from person to person, as well as certain other factors. Although certain brain activity related to word-thoughts might originate from the more easily readable neocortex, because they're more differentiated from person to person, they're that much harder to decode.

Decoding any of the information that might be contained in the P300 signal first requires a 'learning' phase, in which desired responses (such as specific words, emotions, motor commands, etc.) are elicited from the subject while the P300 signals are recorded. By comparing many recorded samples, extraneous noise can be filtered out and a more refined signature signal can be acquired. By applying Fourier transforms (see next section), this signal can be broken down into its composite frequencies, each of which has a correlation to specific brain activity. Analyzing these frequency combinations reveals the basic elements of the signal and offers a higher degree of definition. For instance, certain frequencies or frequency combinations might signify specific areas of the brain (such as the auditory cortex or the motor cortex), which will correlate to specific brain functions. This would help in developing a dictionary of P300 signal definitions through the computer-aided analysis of cross-correlations, not just between multiple signal samples from one individual, but also between individuals. This would allow both universal and individualized brainwave-pattern dictionaries to be compiled. Individualized patterns will have the same unique qualities as a

specific individual's normal brain activity, while universal patterns will have qualities that are generic to all of us. Thus, an individualized pattern, such as for a word-thought, will not have the same effect from person to person, while a universal pattern will.

Like other EEG signals, the P300 signal is extremely weak, which makes reading it from even a short distance (several feet at most) beyond the scalp very difficult without extremely sophisticated equipment (see further on), and longer distances than this are impossible under normal environmental conditions. To get around this, electronic implants would have to be used to read, amplify, and retransmit the signals to a remote receiving station, where they can be decoded.

Fourier Transforms

To understand how the P300 signal can be decoded into information that correlates to specific brain activity, a mathematical procedure called a Fourier transform is applied. Every type of activity in the brain will be composed of one or more frequencies (discussed earlier) that occur together to make up the evoked potential of a P300 signal, giving each evoked potential that correlates to that specific brain activity its own unique signature pattern. These different frequencies arise from the different areas of the brain that operate in conjunction to generate the specific activity and its correlated evoked potential. To put it another way, the complex wave patterns that make up an evoked potential are comprised of simpler waves of different frequencies and amplitudes. The specific combination creates a specific modulated wave pattern. A Fourier transform is a mathematical method for breaking down any wave pattern, no matter how complex, into those simpler composite waves.

With respect to electromagnetic waves, wavelength and frequency are always correlated, so that by knowing one, it's a simple procedure to calculate the other. With a complex wave pattern comprised of multiple combined frequencies, the length of the overall wave pattern will equal the longest wavelength (lowest frequency) involved in creating that wave pattern. By canceling it out with it's opposite wave pattern (the same wave but 180^{o} out of phase), which can be done mathematically, you end up with a series of two or more identical wave patterns strung together in a repetitious fashion. The number of these identical wave patterns within that string will equal the frequency of the next longest wave, and their wavelengths will be the length of the initial complex wave pattern divided by this number. By doing this simple calculation and applying the same cancellation procedure again and again, you can eliminate each composite wave from the overall complex wave pattern until you are left with a series of identical sine waves that reflects the last remaining wave frequency involved. (This description is simplified for ease of understanding, but it gives a good idea of how a Fourier transform can take a complex wave pattern and break it down into its composite frequencies)

By knowing the frequencies of each of these composite waves, it's possible to reconstruct the original complex wave pattern. When you see the readout of an EEG machine, it shows the brainwave patterns broken down into its four basic frequency ranges –delta, theta, alpha, and beta – plus a possible fifth readout representing their combined pattern. The four basic frequency patterns (plus the gamma, epsilon, and lambda waves) make up the fifth readout pattern. It's this fifth readout that shows the P300 evoked potentials as small spikes, and these spikes are caused by the combined amplitudes of the combined frequencies, showing that the amplitudes of each of these basic frequencies plays a part in creating it.

Now let's look at the technology that might be used for remote mind-reading.

SQUIDs (Superconducting Quantum Interference Device)

A SQUID is a device that provides the ability to measure extremely weak magnetic fields (on the order of microteslas), such as brainwaves. These devices are so sensitive that they can detect a change in an electromagnetic field that's a hundred billion times weaker than the energy required to move a compass needle. These devices are used in MEG (magnetoencephalography) machines, which are a step up from the MRI machines commonly used in hospitals for taking brain scans. In MEG machines, an array of SQUIDs are used to read the electromagnetic activity of the brain, and their extreme sensitivity offers much better temporal resolution than an MRI machine,[iii] providing almost real-time feedback with much greater resolution. However, SQUIDs still have certain major drawbacks that make them impractical for remote mind-reading over distances greater than a foot or two. Foremost is the fact that for reading brainwaves, they rely on a carefully controlled damping of the electromagnetic field around the brain. In a MEG machine, this controlled field is accomplished by using a ring of superconducting material around which an array of SQUIDs are placed. Any perturbations of the electromagnetic field outside the ring will affect the readings of the SQUIDs as much as those inside, thus requiring the addition of a pair of magnetometers used in conjunction with each SQUID to measure the magnetic fields both inside and outside the ring, and the SQUID is used to measure the difference between them. Adding to these complexities is the fact that the superconducting material of the ring must be constantly cooled to temperatures near absolute zero Kelvin, using either liquid nitrogen or liquid helium.

Because of the need for a controlled electromagnetic field around the brain for SQUIDs to be able to read brainwaves, this field must be kept as contained as possible, so that even though SQUIDs might offer remote mind-reading capabilities, they must still be within inches of the head to detect changes in the controlled electromagnetic field caused by brain activity.

In spite of the limitations of SQUIDs for remote mind-reading applications, their use in MEG machines provides the ability to monitor brainwave activity with much greater informational detail than an EEG machine does, offering greater refinement in interpreting brainwave activity than can be achieved through the P300 signal.

As we've seen above, both MEG and EEG machines provide a means to record brainwave activity so that it can be analyzed and decoded into meaningful signal patterns that relate to specific brain functions and mental impressions, allowing for the development of a 'dictionary' of signature brainwave patterns that correlate to specific brain activity. Over time and with an ever-greater number of samplings to compare and analyze, this dictionary will only expand and become more accurate. However, these two technologies each have their own particular limitations, as we've seen, making them impractical for long-distant remote mind-reading. Nonetheless, they can still be used in this capacity to a certain extent when they're coupled with other technologies, such as electronic implants (see further on).

Masers

Some people claim that masers are being used in mind-reading technologies. I have studied all such claims that I can find, but I can see no scientific basis for their accuracy. Masers might be being used for beaming signals at a person's head and thereby affecting their brains (such as in V2K), but it's very doubtful that they can be used for any sort of remote mind-reading applications.

Masers are similar to lasers but they emit a microwave beam rather than a photon beam.

Both lasers and masers output waves of energy that are coherent, meaning that the waves in the beam have identical characteristics (frequency, amplitude, phase, direction of propagation). For this reason, they allow for a very narrowly focused beam that can be aimed with pinpoint accuracy.

The concept behind using a maser for reading electromagnetic emissions is relatively simple. The coherent waves of energy in the beam are all uniform and propagating in a long chain like soldiers marching in perfect step. until they're interfered with by something in their path, which changes the state of the waves that are affected so that they will be out of step with the others. In terms of mind-control applications, the beam is expected to be interfered with by the target person's brainwaves, and then reflected back to a receiver where the interference patterns are analyzed, and from these can be determined the brainwave patterns that caused them. All this is simple enough in theory, but there are several problems that would need to be overcome before they could ever be used for this purpose, making them very impractical:

1) Locating and locking onto the target
2) Accurately determining spatial orientation of the target
3) Accurately reflecting the beam from the target to the receiving station
4) Eliminating extraneous environmental interference

For any remote device to be able to accurately locate and lock onto its target, there would first have to be a way to identify the target and keep a precise position on it. The only conceivable way to do this would be to use an electronic implant such as an RFID chip, which offers the guarantee of precision if it is implanted in or very near the target's head. Such a device would also allow for determining the target's orientation (which way they are facing), thus allowing for proper readings to be taken that will correlate to specific areas of the brain. However, this still doesn't make this a very practical means to remotely read brainwave signals, since there is no easy way for the maser beam to be accurately reflected back to a remote receiver without refracting into a scattered beam due to the curvature of the target person's head, which it would necessarily bounce off. The scattering not only spreads the returning beam into a much wider trajectory, but its strength is also greatly reduced in the process, and most of the overall signal information will be lost as well. When you consider what was said earlier about how the P300 signal (the best bet for decoding the brainwave patterns of word-thoughts) is derived from the combined signals from an array of electrodes placed around the entire scalp, you should be able to understand how this isn't at all practical to do with a narrow maser beam, and one with a larger beam circumference would still be ineffective due to the greater amount of scattering from refraction. While a receiving station (or even a number of them) could pick up some of the reflected beam, the majority of it would still be lost.

If this wasn't enough to make this whole concept impractical, it becomes a virtual impossibility when you consider the extraneous interference that would be caused by all the electromagnetic noise that's constantly bombarding the atmosphere between the maser transmitter, the target, and the signal receiver. The maser beam would require a very clean propagation path devoid of any such interference, otherwise this would destroy the very weak interference patterns created by the brainwaves.

Electronic Implants

Electronic implants can be as advanced and as functional as almost any other electronic device can be, but might be constructed through nanotechnology to make them so small that

today they can be quickly and easily inserted into a person through the end of a hypodermic needle, thus eliminating the long and messy surgery such an operation once required.

These devices are used with mind-control technologies to receive, analyze, encode or decode, amplify, and transmit electromagnetic signals to and/or from an implanted person's brain or nervous system. The most crucial aspect of them beyond their functionality is their placement in the body, which must be in a location that will allow them to do their intended objective. In the case of mind-reading applications, this means that they'll need to be placed in very close proximity to the brain, which can be accomplished in a number of ways, including:

a) through the nasal cavity
b) through the ear canal
c) behind the eye
d) through the base of the skull
e) under the scalp

For reading a person's thoughts, it's very likely that multiple implants might have to be used, in order to act as remote EEG electrodes as discussed earlier. However, it's not unlikely that the relevant classified science and technology is so advanced that a single implant might be able to do the job, as long as it's located somewhere in the brain where it could pick up the proper signals, and this will probably be a very specific location that would require a complex insertion procedure so that it's properly attached to specific neural clusters, and more than just one neural cluster will probably be involved. It's impossible to say for sure what level of advancement these devices have reached, but there are some claims that, with the use of nanotechnology, they are now capable of relocating themselves or even growing appendages that work their way deeper into the brain and attach to specific neural structures. However, this is almost pure rumor and speculation.

There is at least one minor limitation to these devices that needs to be considered here. This is that their power requirements must remain relatively small, which means that their transmitted signal will still be quite weak, otherwise they'll need constant recharging. However, the short-term signal output can probably be just as strong as that of a cell phone, so they can be designed to transmit their signals using the same communications infrastructure that cell phones relay their signals through. Some newer implants use batteries that can be recharged remotely, and the more advanced designs are reportedly able to generate their power from the implanted person's own body. Neither of these possibilities are beyond current technological capabilities, so there is little doubt that this is true.

[The remainder of this document is unfinished, so the explanations may not be entirely clear to the reader at this point, but it should give a good idea of what might be involved.]

Learning the Patterns

If full-blown mind-reading applications that can read word-thoughts are being used on a person, then implants are probably involved in some way. The only other way around this would have to be through a more complex method of mental interrogation, which would include certain other mind-control techniques such as hypnosis, subliminals, and/or V2K. I believe that what many people are reporting as mind-reading is really being done through this latter method, so they should carefully consider what's said here.

With or without the use of implants, for mind-control technologies to be able to determine a person's word-thoughts so that a dictionary of correlated signature brainwave patterns could be compiled, a preliminary learning period will be necessary. This will involve some form of 'prompting' for specific responses, and there might even be a certain degree of 'guessing' involved. For those people who suspect that their full-blown thoughts are being read, whether or not they're implanted with electronic devices, the mind-control perpetrators would first have to acquire an entire vocabulary of thought-patterns by trying to prompt the target to think certain specific words or syllabic patterns in order to establish a dictionary. There would undoubtedly be some room for guessing, which, over time and with a multitude of attempts for each word-pattern, they would eventually have enough collected data to compare and determine the underlying brainwave pattern for specific words. Even still, full understanding of a person's thoughts that have any degree of complexity would first require the establishment of a very large vocabulary dictionary for each individual. This poses difficulties, and might take a great deal of time, depending on the situation.

To speed up this process, the perpetrators might rely on a greater degree of guessing, and for those people being targeted with V2K, the perpetrators can use this to influence the responses in such a way that the likeliest responses will be known and expected. It will also help them by engaging the target in 'conversation', which, although it's really one-way (the target hears them but they don't actually hear the target's thoughts), they can use this to elicit mental or verbal responses (the latter which they can hear through normal surveillance devices) and match them with the recorded brainwave activity (provided they have a means for reading the weak signals, such as with implants) to determine the word-patterns. For this reason, targets should avoid engaging in giving the same uniform responses to the invasive voices of their perpetrators for the same promptings. The perpetrators will probably have a standardized method of eliciting specific word-thoughts, which will be used to establish a basic 'language dictionary' that can aid them in eliciting further specific responses that will add to this 'dictionary', one word or phrase at a time. For instance, stating false information about the target (through V2K) that will prompt the target to correct it will help the perpetrators to refine their dictionary.

Once such a dictionary has been compiled, the mind-control perpetrators would still not be able to use this to construct simulated word-thoughts and beam them into the target's head to affect V2K that would seem to be the person's own thoughts. The problem with this is that although such external signals might be projected into a person's head, they would have to simulate the original brainwaves exactly the same way that the brain first produced them, with all the different brain areas with their different frequencies being matched perfectly. Even a slight displacement in the position of the head would throw off the signal completely.

Even if it were possible to beam these recorded signals back at the person, it would not be possible to covertly override the person's thoughts that are going on at the same time, and at best, the signals would only cause a certain amount of interference, which would be detectable, and less than effective. What would be the point of using this method if it ca be detected? V2K is much more efficient.

So then, what method would be most effective to prompt for specific brainwave patterns? The answer is subliminals.

V2K and Subliminal Suggestions

With more advanced applications, V2K can implement subliminal suggestions or even hypnotic suggestions to facilitate this learning phase (or for other purposes). This might be

noticed by the target when they have spontaneous and seemingly unsolicited thoughts, which will be of a nature that would facilitate the perpetrators in developing a dictionary of word-patterns. For instance, sudden compulsions to think a certain word or phrase repeatedly for a short time might indicate that this is going on. Of course, the words or phrases would start with the most commonly used words and phrases, and slowly develop into a larger word-base until a full dictionary of word-patterns was established.

There are certain limitations to the effectiveness of subliminals, and this is to the target's advantage. First of all, although subliminals actually work very well under the right conditions, they're not powerful enough to be resist being defeated, once a person suspects that they're being used. Nor will subliminals be very effective where the suggestions are in conflict with a person's already established beliefs or desires. Therefore, by simply affirming to yourself on a regular basis that your subconscious will not acknowledge any subliminal suggestions, you effectively defeat any attempts to use them. Of course, having doubts about this will defeat your own attempts to defeat any subliminals. That's the nature of the subconscious mind.

I suggest to all targets that they take the time to study the mechanics of the mind (I don't mean the brain), not just for the sake of overcoming certain forms of mind-control, but for your own general benefit. Just understanding the differences between the conscious and subconscious aspects of mind and how they work together can provide you with the ability to achieve things you didn't think you could, and to be more in control of yourself and your life. You'll understand the power that symbols have (which is why they're used in many mind-control programs), and you'll be all the more able to recognize and defeat their (subliminal) effects. You will also become more in tune with your intuitive faculties, and your psychic potential will develop more easily. I know this sounds like a Tony Robbins infomercial, but it's absolutely true (This may be why I haven't been hit with V2K or worse).

Current Technological Capabilities

Although there are many technologies that can interfere with a person's brain activity in various ways to induce internal sounds and voices, there are none that are known to be capable of reading thoughts from a distance without the use of some sort of amplifying device (such as an electronic implant) in very close proximity to the person that is to be targeted. Many people assume that the available literature indicates that such capabilities exist, but a close examination reveals that it is only speculative at best, and overly suggestive at worst.

Research into brain activity resulted in the discovery of what is referred to as the P300 signal. The P300 signal is an EEG signal that can be read from the scalp using electrodes, like with normal EEG readings. The P300 signal reflects a person's thoughts and other mental activity in a way that allows them to be decoded. This signal arises as an 'evoked potential' in the EEG readout, and this evoked potential carries the encoded patterns of every thought, reaction, motor command, auditory event, and visual image that arises in the target's brain.

Decoding the P300 signal first requires a learning phase, in which the syllabic word-patterns derived from the P300 signal that correspond to the subject's thoughts are recorded. This means that there must be some initial time taken to do this before any accurate mind-reading can take place. It might be possible that a generic dictionary could be compiled that contains the averaged EEG patterns from a wide range of test subjects, making this learning phase unnecessary after a certain point, but there will undoubtedly be complications, as

explained earlier. The P300 signal more readily allows for the detection of emotional states, deceptive intentions, anticipation of movement, etc., than it does actual word-thoughts.

The P300 signal is very weak (30-50 Hz, 0.5 milliwatt), which makes reading it from a distance impossible without extremely sophisticated equipment, or unless the signal transmission is aided by an electronic implant. This signal is what has become the basis for 'Computer to Brain Interface' technology that is being developed by computer hardware manufacturers and medical prosthetics companies to aid in 'non-contact' operation of devices (such as the 'Cyberlink Mind Mouse'). However, these developments rely on electrode attachments or very short-range transceivers to detect, amplify, and relay brainwave signals.

Technologies that can penetrate solid objects, such as that developed by Patriot Scientific Corporation (the Patriot 'Ground Penetrating Radar' system), might be assumed to be applicable as a mind-reading technology, but this is not the case. These 'through-the-wall' technologies can only detect the vibrational frequencies of material substances, and not those of the more subtle and fluid emissions of electromagnetic waves. They rely on bouncing their transmitted signals off of the solid objects to be detected, which cannot be accomplished with the more fluid EM waves, such as brainwaves. These technologies must be calibrated to the specific substances they seek to detect, which emit steady frequencies of a specific narrow range corresponding to the oscillations of the atoms in the material to be detected. Brainwaves cannot be 'bounced off', and so these technologies do not offer the capability to detect electromagnetic waves that are propagating in the air. Even if they could, there is still the problem of reading and decoding the four-dimensional emanations of the brain matrix, which in normal situations is not stationary.

The most advanced technology that is known to exist for reading brain activity is what is known as MEG (magnetoencephalography), which is a step up from MRI (magnetic resonance imaging). MRI can only take 'snapshots' of brain activity, and these are limited to one snapshot every few minutes at best, and they don't reach very far into the brain matrix. MEG speeds this up tremendously (a snapshot every second or so) and reaches into very the center of the brain, but it's still impractical for real-time monitoring and has certain hardware requirements that make it completely useless for remote mind-reading applications – specifically, the giant electromagnets that are used must encircle the brain completely and must be within centimeters of it in order to pick up its EM activity. Also, these electromagnets use superconductive materials that must be kept at near absolute zero temperatures, which makes this even more impractical for the purposes of remote mind-reading applications. MEG uses SQUID technology (Superconducting Quantum Interference Device), which some people mistakenly think can be applied to remote mind-reading technology, but this is not the case, for the reasons just explained.

The only technology that I know of that *might* exist that would allow the sort of abilities necessary for mind-reading is scalar-wave technology, but this is still speculative as to whether it exists beyond theory. However, if it does exist, it promises to offer all of the functionality required for remote mind-reading, and then some. If it does exist as described by its leading authority (Lt. Col. Thomas E. Bearden), then a full replication of the EM activity of a person's brain can be acquired in real-time and recorded for analysis, eliminated the time constraints of pattern learning that known technologies would require. But at the same time, the greater functionality of scalar-wave technologies would suggest that far broader applications would also be experienced by targets, including simulated sensory data (full sensory hallucinations involving sight, sound, taste, touch, and physical feeling), to name the likeliest.

Concluding Comments

The intent of this document is to help targeted individuals who suspect or believe that their thoughts are being read in order to better assess their own situation, and hopefully see how 'mind-reading' might only be at a superficial level or even faked by the perpetrators, and where V2K might be being used in an attempt to prompt certain predictable responses in order to create a 'dictionary' of word-patterns correlating to their thoughts.

If nothing else, two things can be ascertained:

1) Electronic implants are almost certainly required for mind-reading capabilities, due to the weakness of brainwave signals.

2) Projecting voices into a person's head is far easier than reading their thoughts.

Since I've never experienced V2K myself, and I certainly don't have access to the technology involved, I can only offer insights based on what I know from researching the functioning of the human brain, wave mechanics, computer engineering, and science and technology in general, so there may be things I've said that those who *do* suffer from V2K might disagree with. If so, I'd really like to hear your comments or opinions on what I've said here, in order to better understand the actual situation, and to correct any errors I've made in my understanding.

I would also be interested in being directed to any documents that would reveal that the technology is more advanced than I realize, provided it isn't based on mere speculation by the author or is only discussing future prospects in science and technology.

I am open to discussing anyone's experiences with these sorts of technologies, to help them in assessing their situation and coming up with ideas and methods that might be used to learn the true extent and limitations of their perpetrators abilities and how to combat them. Sometimes we need an outside perspective to determine whether or not things are as they seem, and what might be done about them. I'll always respect your beliefs and opinions and certainly won't question your sanity or reasoning abilities. And of course I'll respect your situation and the difficulties you face. You can reach me at forwood@live.ca, and all correspondence will be held in strict confidentiality.

Similar capabilities were actually known about as far back as the late 1940s, when Andrija Puharich was designing hearing-aids for the deaf, which used a tooth implant to receive the electromagnetic signals (patented in 1961; US Patent #2,995,633).
Due to their small size, implants can still only transmit signals a very short distance, making it necessary for an amplifier/retransmitter to be located within 10 to 20 feet of the target. Specially rigged cell phones or computers offer a possible means for this retransmission, but would only be useful while they were within range of the signals from the implants. Still, people who suspect they are targets of mind-reading technologies should take this into account as a possible means of outgoing signal transmission.
An MRI machine is completely impractical for reading brain activity in any way that would make it useful for mind-reading purposes.

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