Ben Philipsonu2019s Background and Early Career

Today I'm interviewing Ben Philipson, who is the owner of the Cura Tronic system of devices. So I'd like to ask Ben, over by himself, his background and his education and start with that.

Okay. Well, I'm a Dutch time and a I lived half my life in Amsterdam, in Holland. I attended a various schools, including studying, electronics and specialized in medical electronics because I was very much attracted to the medical side of applications, and advantages which being made and do science in the medical field.

I was thinking of of the rectifier company in the Netherlands, selling, heart monitoring systems. Thesis therapy equipment. And in my function over there, we got very often asked by medical doctors and cardiologists what to advise to use in the hospitals.

So at that time, we were selling a, a monitoring system and nurse patient manufacturers in Germany. And, new developments had to be interpreted on those devices, which was not always possible because, well, that is a big, a large manufacturing company behind here.

So then less flexible than if you do some interpretations yourself. So what we did and what I did actually was adapting a cardiac monitoring system with special alarm system.

Second, traces memory system, all electronics main mainly on the electronics and partly digital electronics. To, these existing devices. I designed a battery backup systems for a major power defibrillators.

We improved, possibilities, and we improved possibilities for fail safe use. And nurse proof, devices, applied in hospitals at the same time, and we were actually promoting physical therapy devices, short plate, microwave and all kinds of stimulators.

This brought us also to a, an opportunity field. I developed a full range of electronic equipment, including for anesthesia point detectors and, diagnosis treatment systems and laser systems.

I was the first who, developed a new me and a laser system for a wrinkle treatments. I know that I still won in U. S., in Belgium, still today. And because there has been some advice on so long ago.

And I developed the full range of electromyography biofeedback devices. I hooked up to the first, one of the first EMG devices to an Apple two plus computer.

And when it came to the market, showing on the screen to the users that performance using it also for children to activate an electrical train, for instance, as they were able to, cross a certain amount of, EMG signal.

I developed, a temperature and monitoring system, a, for biofeedback, a GSR response system for biofeedback and a whole bunch of devices. But at the at the moment, I said, listen, that's very nice.

And I had a nice job, and I was, due to take over the company. Like, you know, I'm Jewish, and I, my family suffered during the Holocaust. Major part of my family was, and didn't come back out to the camps.

And then luckily, my parents survived. Also the father of my wife. So we decided to go to Israel, and that's what we did. We moved in the end of 1983 to Israel, but not after having been introduced before, a couple of years before, to a German scientist by the name of Doctor Mumford Fisher, who actually was a one of the earliest, maybe the earliest developer of, pulsed magnetic field system, which was called a German, magnetic field therapy gate.

And you understand some German. So you're in the studio work, methodical therapy devices. So he came to the

market and he was looking for a he was selling in Germany.

And it wasn't simple because in the same time period, electro acupuncture, homeopathy, all these kinds of things were coming up. So bringing something new was not so simple.

But anyhow, in a way that I picked up on, what year was that? That's right. The end of the 70s, I think 78, 79, something like that. So I visited his office in Germany and a saw the equipment and I saw what they were doing was actually very interesting.

So we, he came to Holland and we did a tour together, and we introduced the technology to, in the pure of parts and also medical doctors. Quite interesting.

But the problem was there was a lot of competition, as I mentioned before, already, in other fields, alternative treatment fields. So after a three years of some, after we sold the quite a few systems in, it was economically not attractive anymore to continue working with that.

And we dropped it, out of our program actually. Now, the interesting thing is that when, when I came to Israel, I started working for first for a company, a monitoring system, heart monitoring system, traveling a lot.

I also work for a the largest school system here in Israel. In the laboratory for, development for our students. So they could, practice that theoretical, what they learned at school by building electronic devices.

Anyhow, I ended up at the company, selling, capital equipment, little triplets. And some of these systems for prostate treatment. And, I did that for almost ten years.

But before I left that company, I traveled a lot in, in Eastern Europe. I opened the market in eastern, and in Russia actually was very interesting times.

During my, my travels and a lot in Germany, I saw a renewed interest in application of magnetic fields, specifically in the field of osteoporosis treatment.

So I did some follow up and I said, if this is coming up again, well, we should definitely look into it. So I went to my boss, know the company had initial them and I proposed.

Listen, we can do something similar and but we can do better. And I went to one of the exhibitions over in Germany. I saw one of those low intensity devices and I said, that's not the way to go.

Moving to Israel and Entering Magnetic Therapy

We developed the system, we started showing it. And oddly enough, the first systems were sold in China, where there was an enormous international, enormous interest in these.

And after we also added the diagnosis system, for osteoporosis, an x ray based peripheral measurement system. And then I went to China and I trained the doctors over there how to use the system.

And then also we got interested from, in the Russian space agency, those cosmonauts who were returning from the Munich station after so many years. They lost a lot of bone density.

So one of the devices and that actually were in the treatment center for those cosmonauts I was requesting anyhow, to cut the very long, short, very long story short, I said to my boss, listen, I want to go independently.

And I, I'm going to leave the company. You don't want to let me go. But, I said, yeah, that's that's my my calling. So then in 1998, I started a, my actually preparations for developing my own devices.

And it took almost two years to design the very first parameter device, introduced to the market, started my own

company in the year 2000 and actually started selling the device.

So I was very, very early in the market, in the home market and in the low cost professional market for MDS, for instance, like yourselves. And the rest is history, as they say.

It's it's slowly grow, grow. And nowadays I think we are possibly one of the leading companies in the pulpit PMF manual. We have devices in almost 100 countries around the world and five continents.

We are the only company who are manufacturing both, oscillating through PMF systems and in pulse high intensity PMF systems and more or less covering the whole range of possible applications.

What to expect from a primitive life, including your own ideas. With the neuro programs recently, integrated according to your request in the one of the devices.

And, it's fun, to tell you the truth. It's it's nice to be able, to help other people, to find this technology. I mainly concentrate on R&D and in backing up of, the services like yourself.

And you do a fantastic educational job, I think. And I'm not the only one thinking this, and, enabling you to advise your potential customers on which system is probably best for their applications, and, happily enough, our devices are one of the devices or some other device you are promoting.

So that's my background. All right, well, let's go back. Thank you for that. Let's go back and talk about most your transition from, let's say lower intensity systems.

And, compared to the devices that you probably saw in Germany at the time, most of those are probably very low intensity systems. Right? So let's arbitrarily let's say that low intensity systems are let's say under 200 micro Tesla 300 micro Tesla.

That was there below two, two gauss or three gauss. Yes. So your system one one of the lowest intensity ones that we have from, from your development.

Actually, the whole body pad is about 70 gauss. Correct. All right. So that's already almost 70 times stronger than many of the other legacy, low intensity PMF systems in Europe.

Why did you go up from that low intensity level, very low intensity level to the intensity level that you that you have. I started with, yeah. I didn't go up.

I simply didn't believe that it could work very well. Gut feelings. That's the truth of the matter is, I thought when I looked into the possibilities and into, what was on the on the market at that moment, I didn't believe that those very low intensity devices could do a good job.

It possibly did a good job for, well, superficial treatments. It does have some advantages for a, for, for capillaries and for blood treatment. But getting through into the body, deep into the body, that's, that's not that's not possible.

So when I looked into the available, documentation studies put on the market, I saw, an article about two Japanese scientists and a day long ago in the in the 50s, they discovered.

And the electric effect of boom. There are electric fields and there are magnetic fields. Electric fields are produced by a voltage. And the voltage exists when there is an electrical cable connected somewhere.

But it's, not carrying any current inside the cable. And the in the electrical field can be measured in by the volts per meter. That's the distance over from the cable.

Now then you switch on the, the lamp and actually then the electrons are starting, going through the cable over to the lamp and then around the cable, and there is an electromagnetic field which is measured in Gauss or in partial,

and that's, that's actually what we are talking about, about magnetic fields right now.

Go to the next slide. I was talking to Japanese scientist, and they discovered when they took a piece of bone and they put it somewhere, fixed it at one side and put a weight on it and the other side, and they started moving it by one centimeter.

It's, almost, let's say a third of an inch. And then they could measure on both sides a plus minus sign, an electrical, excitation voltage of $1.5 million.

And, and this was in sync with the movement of the, weight on the other side of the bowl. And and they said, okay. Right. We have here an electric effect of the movement of the component.

If you compare the same sense with your, alarm clock, your alarm clock, when it does beep, beep. How does it have a crystal inside and the crystal inside is I would think that by electrical pulsating current.

Now then it starts a very tiny movement of the magnet of the of the electric, element itself, which gives, the movement into the free air. And that is being translated into sound.

And that's the basis of basic of how you hear your alarm clock in the morning when it goes off, because you only have to set your alarm at a certain time and at that certain time, an electrical pulsating current is being applied to both sides of the electric element in your alarm clock.

Now, you can do the other way around as well. You can say, listen, if I apply a, an electromagnetic, induction into a certain element, I will create in the element or in bone.

In the body, I will create a very, very small, tiny electrical current going through both going through cells. So what you actually a thing what you get is microcurrent inducted or created inside the body of a human being because of induction of pulsing electromagnetic fields.

Which I make is called Faraday's law. Faraday's law of induction. Right? Correct. Now if if for instance, if you have a coin, this is a flip for them.

Why He Chose Higher-Intensity PMF

So you can see when I move my mouse the right. Yes. Okay. Now this is the coil. You see the the electromagnetic force go out within the coil. And here you see it stretch out and it closes again in the same coil, this electromagnetic field.

Now this electromagnetic field extends beyond, of course, beyond the cord itself. And it spreads out into the air. Now, I will get back to this, in a moment, because some people say, all right, the electric, the magnetic field is actually, attached to a coil and a, like a bubble of a and of a so but you say, which is in my I might have been is nonsense because of course, that is a field around it, but it's not attached to the field.

It's gone through. The should be range should be quite so, and it spreads out much more then inside the bubble. But it decreases in intensity, of course, when you get away from it.

Now this slide shows you here is a coil. Right. And since now the most intense field is the darkest, always the red color. But this doesn't mean that when you get away from the coil and the color gets light, but you still have an electromagnetic field, it's less in intensity, but the electromagnetic field across over there.

So you should not limit yourself only where the coil itself is, but also around the coil itself. Now and this brings us, to what actually happens in the electromagnetic fields, the white lines, an electromagnetic field gone through a free space over here.

It's called magnetic permeability. The, possibility of the magnetic field going through the space itself and creates

inside an internal field. Now, if you compare this to the human body, the human body has a very low magnetic permeability.

It's similar, as air. So the electromagnetic fields go through the body quite easily, not under pressure, but quite easily. But if you, for instance, take a metal iron, it will absorb the magnetic field lines.

And because it has a very high magnetic permeability, the iron and it will block off, a major part of the electromagnetic fields. That's why I also say, if you treat a person on the metal and you put it on a, on the bed, make sure you don't have metal on too many metal parts inside a bed because they will disturb the electromagnetic field lines of the, of what you're trying to apply.

So it's better to use a wooden table, for instance, or air compress or some other material. But not metal. Not metal. Right now. This is then shows you that they're a new form and industry space.

The new not a if you are, which is similar for air and for the human body. So this shows that, electromagnetic fields will penetrate the body of a human being.

Now, how do we explain this? And that's a problem because, there are and we will get to that in a second. There are very complicated calculations. For a, measuring and for, establishing the electromagnetic field at a specific distance of a coil.

So as an example and I repeat as an example, I use the only a one point source in this station to learn and everybody knows that it is very easy to understand.

If I go away from the light in the light diminishes the further you go away from the light. So if you are at a distance of one, let's say one inch from a light source and you go up to an in distance of, for instance, then each eye could be feet or it could be meters or whatever.

The intensity of the light drops dramatically and it's easy to understand. And that's also the example you use, in the drops by the square, the inverse square of the distance.

Now, this is correct for point light source, which is used for an x ray device. These devices, for instance, it can be used for navigational measurements.

But for electromagnetic fields it's not the correct way to measure. But again then we get the can be an approximation. It's a it's a good approximation. Yes.

You can use it as a comparison for explanations. How electromagnetic fields A diminishes in intensity over distance. Yes. Yeah. In fact this is called if I recall, this is Newton's law.

And I don't want to go into all kinds of laws like Coulomb, Newton, Faraday mass. Exactly. It's complicated. It's too complicated. You know, if people are interested in this, everything is on the internet.

They find it in Wikipedia with explanations, whatever. But I don't want to go into it, but I want to just to outline the basics of electromagnetic measurements and how it's being that this now defines, which is a very complicated form, a line sheet here, another form, and this is true for a wire.

What is being measured. There are two. There were two French scientists. One is by the name of Biel and the other Zafar, and it's called the bills. If I will. And this allows us to calculate at a certain point in space the strengths of the electromagnetic fields.

And there is another formula. Here is another example in a wire and you get a certain distance. How strong is the electromagnetic field still at that specific point.

Let's concentrate one second on a, on a circle I call this is a coin or electromagnetic one. We see the

electromagnetic fields around the coin, and we want to know what's going on over here, because we are not we are laying on the flat surface of the coin when we are on the metal.

But our body is a, let's say is is a feet thick. So I want to know what if if it penetrates to a my bones and myself completely. So that are again here is the expression of the magnitude of the magnetic field of the B or survival looks very complicated.

This is complicated. So this is not the time and the moment to go into this because as I said before, people should, Google and the biosphere law and they will understand that it's almost not understandable only when you are into physics.

A very deep. And I just want to point out we are interested in the fields things of this point. P well, that's exactly at the axis of the coin. So this is but I'm also interested.

I want to know if the field is still here and if this loop is still here. So what this number gives me, I'm not impressed with the idea, but if you want to know, definitely yes.

Our calculations you can fill in in a the current of the load. We can fill out the radius of your loop of your core. You get the B fact that the B is the electromagnetic field strength, also called h, where when measured in in human body, because it doesn't make a difference or not much.

If you get an impression, you get the details. You can also add what is the distance from the center of the loop. And then you get the strength at that specific distance.

But I don't want to make life much easier by comparing. What's the difference between high intensity and low intensity electromagnetic fields? You just the MRI?

Well, I read in one of your articles you also refer to the MRI system. And what is an MRI. And MRI needs a very, very strong electromagnetic field or a magnetic field actually to align the protons which are actually tiny magnets inside the body of the right of a healthy of every person, and which is the center of hydrogen atoms.

And in those programs that are like tiny magnets and those tiny magnets can be aligned. So if we put the patients under a, MRI in an MRI machine, we are going to align the protons, under the electromagnetic fields, of that specific person.

If there is no magnetic field, the protons are pointing in all kinds of directions. But as I said before, protons are tiny magnets. So as soon as I put them in a very, very strong like the more kinetic field and mind you, this is not a field, which is or it's a field which is much stronger then, you have, in a low intensity or medium intensity or possibly even a high intensity PMS device.

These are strengths of a where you can have an MRI machine of half a lot. But if you want to get the good picture, the quality of the picture, you need 1.5% going up to three Tesla.

So what happens actually is when a person lay in an MRI machine, and you start to hear bing, bing, bing, bing, all kind of sound very loud sounds. It's the reason why a person in the machine gets a, headphone and to, but music, for instance, so it doesn't disturb too much.

And those noises are being caused by very strong and electronic, and process going into gradients, currents inside the MRI machines, which actually, this very much force tilts the protons out of sync of the magnetic field at the moment that the gradient is this or that, the radio frequency field is being disrupted, the protons jump back into the straight direction and they emit a form of energy.

Which energy is being measured very special way, which is inside the device and is the basis of being forming. For the 3D images of an MRI machine, you can get slices, of pictures and, it's, different results.

Compared to machines. Machines are X-ray machines, but an MRI machine, a show, for instance, soft tissue, it shows cancers and it has different application.

But again, I don't use expensive. I don't need the technical stuff behind it.

Field Strength, Penetration, and Tissue Effects

So that's the proof that you need very strong magnetism in order to penetrate the complete body. So why a if it's possible to have very low intensity devices and PMD devices to penetrate the full body, why don't they make those very low intensity devices?

Also, MRI possible need to completely penetrate through the body. So that's the reason why you need high energy. Now as I said before, electromagnetic fields are being inducted into the body of a of a human being and they create very small, many tiny a currents.

As I explained before, an electric effect. The tiny currents they need to penetrate inside blood, inside bone marrow, cerebellum, in the heart, in the kidney.

And if it is able, which I created with, pulse rate for some frequencies of ten hertz, which is a popular, popular app for, PMF devices and show the DNA, the electric properties, for the penetration of the different areas of the different, tissues here.

You can see, for instance, this number is low number. So blood is easy. Blood is has a certain components of oxygen. It is partly a problem. It may be diamagnetic.

Depends on the, saturation of oxygen and on the influence inside the blood and, of the magnetic particles. But now look at the other end. The cerebellum, the head.

It's five, six, seven times more difficult to penetrate with electrical currents and switch blood or look at the kidneys. It's very, very difficult to penetrate through the heart.

So the kidney. So you can't just say, okay, use a low intensity device for treatment of, the brain or the kidney, but you might be able to use a very low intensity device, for instance, for blood treatments, because blood stream is very superficial in the capillaries under your skin.

So it's very easy to get there. So you don't need a lot of power and a lot of intensity to reach inside the blood. Now here's another table. It's all kind of difficult.

Explanations. Electromagnetic in this, permittivity. Again, compatibility and wavelength. Like you see differences in the different in for fat, for muscle, for bulk e-cigarettes and the different numbers in this table.

We are now also the skin. There are skin, and fat and muscle have different propagation for, for waves. So if I want to penetrate deep inside the body or if I have, let me give another example.

Modern implanted devices like pacemakers or like a other device is pumps, insulin pumps which are implanted into the body of a patient. Well, the surgeons like to implant those devices, in fatty tissue, not in the skin.

That's too superficial, but not in the muscle as well. And why would you want a implant effect? Because those devices can be charged like you charge your smartphone, on a pad, by placing your smartphone on the charging pad.

The same can be done over here, because the wave propagation effect is much lower than from for muscle cell to charge a battery inside an implanted device inside the body of the patient is much easier because the wave propagation inside it is lower than, surrounding muscle or bones even or whatever.

Now you're talking about electrical or wave transmission or what? What is the wave that's transmitting through fat versus muscle? It's the electromagnetic waves, actually, which you are going to induct into the body of the patient.

So you want you want to do that as easy as possible. But although the magnetic field penetrates through all the tissues in the body equally yes, yes and no.

But it is like the body. And that's this picture actually, because your question was expected. Sorry. This is a picture for light, but the skin is has sweat.

The skin is not flat for electromagnetic waves. It has a, different, superficial, adhesion of strange material and not all the electromagnetic, intensity you want to induct into the body of the patient, get through.

And it is not critical for high intensity devices, but it might be critical, typical for low intensity devices, because anyhow, they have a problem already to penetrate deep inside the body, if at all.

So they will suffer. Also like if this is for instance. No transparent glass, which you have in the shower, for instance, a part of light is being reflected, a part is being absorbed inside, the glass part is being scattered around from another direction, and only part is being transmitted through the skin inside the body of the patient.

I don't say this is a major issue, but it might have infrared and it possibly does have influence on very low intensity electromagnetic fields, devices.

Now let's talk a little bit about a magnetic flux density. I don't need to explain what you are seeing over here. If I open it my my force very, very far.

I got a lot of stuff. I don't know what I got, so if I open it just a little bit, that's all I get is a couple of drops. Now let's continue to the next slide and look at this.

If you have a coil over here and my field strengths go through it. So this area or I have a larger column with a larger magnetic flux a larger magnetic flux density.

Then I get much more magnetic intensity inside the body of the patient. And I will get back to this in a minute, because this is very important for the size of the coil.

And this has a lot of, implications for other possible, information. I will a, I will address little bit later. Let's first look at, some basic stuff sine of waves, the red one or a square wave or a triangle wave or a thought to read a lot of information is going on the internet from which in it?

Which one is the most important one? And talking about not other studies and all kinds of different publications, which is the right form of a wave for electromagnetic therapy and well, I want a let's put it this way, Fourier or sorry, I apologize using the metaphor here, but he said that, the all the other forms of waves are a part of a sine wave, and this can be proven also a, actually, by using the right formulas.

But let's take a look at a, for instance, the square wave or look at a kind of triangle wave. Because if I induct into the body a square wave, I don't get inside the body.

Exactly. This wave is more being bent off because of the transition time, because of the a, and the obstructions. It means although it's a the body is it's transparent for electromagnetic wave.

It's also, being influenced by all kinds of external, reasons. But I just wanted to show that this area is a critical area and you don't get the very fast time of what you called also, Liberty.

I will get back to that. In, in a second, because t is the rate of change of the magnetic field over time, and it's being expressed in seconds. Now, this whole discussion about the form of the A of what's good or not good for PMF, I think is exaggerated and possibly even wrong.

What is correct? If we have to look at the duty cycle? The duty cycle is when a signal is being inducted into the body and when it's switched off the duty cycle.

This is not a frequency. This is one frequency distance, but this is the during one pulse. How much time actually the energy is going into the body. If it's a 50% duty cycle, 75% duty cycle, 55% duty think.

These are just a couple of examples. Now it's often not addressed, for instance, by very low intensity or possibly medium intensity battery devices that they devices need to get the energy from the battery, rechargeable, not rechargeable, that no matter all the energy they take from the battery or more, almost all the energy goes into the pulse itself.

So if you have a duty cycle of 50% or more, the battery will be exhausted very, very fast. So the manufacturers of those devices look probably more at a very short duty cycle.

And why is it important to extend the battery life? But on the other hand, PMF is the energy medicine I want to put into the body of a patient energy and if I have a very short duty cycle, the amount of energy is really very low.

I get back to that later on as well. You know, that is already okay if I have a very short pulse and this is an example of a 4000 gauss, energy pulse by a, high intensity devices, the, like a spike up systems or, like, flash devices, which give a very, very short a m, 200 microseconds or less than a millisecond of a second pulse.

The intensity is very, very high, but the pulse is so short that inside the walls that hardly any energy. But if you look at the different systems like the true oscillating or what they what are called a curve from qualitative, right.

This yellow line we manufacture. And you look here at the 500 gauss for the three track. You get when you have a duty cycle E more than 50%, you get the enormous amount of energy which you end up in the body of the patient.

And that's what energy, really. Energy medicine. This I can hardly call energy medicine. So I just wanted to differentiate and point out it's nice to have very high intensity pulses, but I application for very high intensity pulses is more for.

Yeah, I'd like to call it number up the show a number of nerves. And this is more for treatment. The underlying reason why somebody needs sufficient PMF energy to get in the people in the body.

Now I talked about DDT and that's what you did. Also in your article. That's the speed of a how fast the, energy is being inducted into the body of the patient and the faster a, the intensity is being changed.

The or it's called the speed of induction or the slow rate. It's also called slow rate. That's actually DVT. It's the change of the micro magnetic energy over time.

Waveforms, Duty Cycle, and Energy Delivery

And if you can keep it as short as possible for that as much as possible energy in the shortest possible time I in that I penetrate completely inside cells, inside tissue.

I might even get the electron formation effect in cells, which makes them more transparent for other influences, detoxification or inducting and possible.

Or I medications inside cells. Energy inside cells are nutrients a backbone or nutrients or nutrients of course. Yes. And to energy get cells ATP. But that's what's been called and that's why it's so important to have a short DVD or to have a fast speed of induction inside the body.

And why do I say this? Because using a triangle class, which are a sinus process, which is very slow, you don't get this very deep effect which you want to obtain inside bone and inside difficult to penetrate like the the brain.

Most effective. So that's why it's important to have a pulse which goes fast inside the body as possible now. So this looks ideal, right. We have here let's say three hertz.

She pulses in the second if this is a second and I use a square wave, but it doesn't work that way because I want to that energy in psychic pulses now.

So I go to my next slide. And that's what we do. We have a base sinusoidal a sign of wave a basis for our devices. Now what we do is inside that orange square you saw here before are a series of those pulses.

Now, as I said before, a sine wave starts very slowly. So I don't get the effect as fast as possible inside the body. But when we can detect when the signal is at the height, the highest point of the sine, the signal, and then switch it on in the body, I get it very, very fast, right?

Time inside the block, which I showed before the orange right before. And this is all energy in that the blue area inducted into the body of the patient inside each individual pulse in that window, that orange window I showed you before.

So how can I influence the amount of energy that goes into building? So first of all, I said that the first right time we divided. Yes, we have over here because it extremely sharpens.

Then we have a couple of these inside each block itself, even if it's three pulses per second. We have inside each one a couple of those. These are all energy inducted into each, into the body of the patient.

But I don't already know it intensities. So what do I do? I cut off the sine wave and I use only this part. But I still get them very, very, very fast right time over here.

So I don't trade off. I always get inside the orange window I show before. Even if I use lower intensities, I get the same amount. It did the same speed of right.

So inside the body of the, of the patient. Now let's talk a little bit about mess. Now I give the mattresses met. So you want to call it you know, you probably recognize this one.

This is a very funny way of manufacturing a whole body mix. First of all, if this is the head side, why are the. So this coil is it has many, many less turns or many less Cooper turns than this one.

And this ones I don't quite understand. If the brain is much more difficult to penetrate and the kidneys are much more difficult to penetrate, why would I put all the energy on my legs?

On my head? I don't quite understand this. I also don't understand why they have a light surface. Some people say yeah, because the surface is large. You get a lot of intensity, which is not true because also this device specific device has a very low, current.

So the amount of intensity of energy being generated by these skulls is a very, very low. Now look, another way of doing it is another device which has an experimental method which consists of many, many, many for eight for 32 cores are over here, but they're all very small coins.

And this very small cross, they overlap over here. And but that's a different issue. I might get later back to that as well. These are very very low intensity energy a and give a pulse.

And I have my doubts. Although they are spread out if they are covering the complete range because inside over here it's possibly not so much intensive.

Yes, here. And I know that this device is a battery powered device. And I said already before, a battery powered device, well, it needs to get this energy somewhere.

A might even be a square wave pulse. But again, I am not into a a saying which one is better than the other one? I'm just trying to elaborate a little bit on the different, wave and and mattresses.

Let me get this up. Even in the section, what we do is different. We have eight cords spread out through the mattress evenly, as much as possible. Scientifically, it's impossible to get an even field over here.

That's impossible. Because of the bias of what we talked before. But the electromagnetic field is not only here, but it's spread out over here as well.

And it's better for me here as well. So we get some more or less even a electromagnetic field, whereas all of these calls are both at the same time, where as in this one, I'm not quite sure if they are also at the same time, possibly even one after the other, but you probably know better than that, right? So, you know, part of the concept is that if the energy is flowing from the left to the right, it takes time and as it takes time and a distance, you have a loss of energy.

So that presumption would be that the bigger coils at the end are compensating for the time and distance factors. I don't know what the theory is behind it, but okay, let's let's go back okay.

But it's not perfect. So what we try to do what we have a very, different come from a configuration of two very large, heavy, thick cores into the three ultra system.

And, I'm, I'm going and getting over here some more explanations in my, in a little bit further on and let me see if it's already there already, because I might have skipped.

Yes, I might have skipped. Let me go back to a different screen and I want to share this screen with you. Let me see how I'm going to open. I'm going to share this screen with you in my screen sharing is new share.

I'm going to share this one with you. All right. You have I have here an active demonstration where you can see inside. You see the small yellow corn inside over here?

Yes. Okay. Now, if you have a electromagnetic field over here, the concentration is close to the correlation, but the field lies. They spread out. But the intensity that you have is very small.

Prime is not very big. What I can do, I can increase the current going through the coil over here. And I'm going to do that over here. I'm going to increase the current.

Now you will see the field has extended somewhat more, but the highest concentration of the field is so close to the coil it doesn't spread out as much as you would like to.

Even if I increase the current of the coil even more, it's still concentrated very close to the coil itself. Now I'm going back and I'm going to increase the size of the corn.

Look what's happening over here. The field density is being spread out over a larger area, more evenly. Well, the current is still low, but I have a very low.

I have a large column and I'm going to increase the current even more in the coil and see what happens over here. Also different fields farther away from the corn.

And so the intensity increases. So I have a very nice spread. Now I said before, the two large cores of the 3D of system two millimeters. Let's go there.

Let's go to the very large coil. But the main field is still around concentrated the corn, which is not bad at all. And now I'm going to increase my current look at this.

You get a nicely, evenly spread electromagnetic field and so the better the course, the better the strength. But this

requires a high current and I will get back to that later on.

And I'm going to show you another, slide. Let people see where the body would be a better position. Where would the body be on that coil? Oh, the whole top part of your torso would be here.

And there is another coil over here, there, and the rest of the body. So your whole body is being, as I like to call, a vast and electromagnetic fields.

Now that that coil is in a pad that is horizontal and flat. Yes. Body lays on top of it. Correct. And you lay on top of it, you can have another patient laying under the bed if you like that.

I call that 3D treatment. Oh. Right. Okay. So this is a lie. I think it's a demonstration. It shows more or less. Or exactly. What's what's important and then what's less important?

Okay, let's go to the next slide. Let's talk a little bit about it. Transcranial magnetic stimulation TMS. You mentioned something different. We overlap.

And maybe, if I may, you allow me to use misuse a little bit. The word of PMF for, brain treatment. Yes or no, I don't know, but what I do know is that TMS treatment works differently.

The image is transcranial magnetic stimulation is using a coil which generates up to a Tesla and thousand gauss of electromagnetic fields around to coil being held over the skull of the patient, of the person being treated in using so-called eddy currents, electro magnetic and a and no current currents, electric currents, sorry inside the brain of the patient.

And why is this important? Because this is an important, treatment for demand for depression. That's the main applications, although they are also looking in Alzheimer's in, in, for, Parkinson's.

Yeah. Right. Oh. So this basically any neurologic process. Absolutely. Yes. By using a cord like this with very high intensity, you can penetrate inside the brain and reach the dorsolateral prefrontal cortex.

So which is the part we want to treat for depression. It's at the front side of the brain.

Coil Design and Whole-Body Treatment Systems

But in order to locate the area you have to do a couple of tricks, which is being done with, true RPMs, repetitive transcranial magnetic, turn and therapy, applications which like brainwave or and, and neuro software that are specialized companies who manufacture these kinds of devices.

But let's look now, why do I point out the size of the cause? They look when they use a handheld cause, for instance, four inch, four ten centimeters or a six inch coil, and you need two Tesla to penetrate three centimeters, little bit over one inch inside the brain of a patient.

If you use a six inch form, if you use a four inch coil, yes, you can get away with one Tesla to penetrate deep inside the brain. And why do I need to to get deep inside the brain of a patient?

Because I want to have in the area in the dorsal left, their own prefrontal area here I want to create electric currents. And that requires those kind of applications.

Now having said this, applications are better done with a show called figure eight coil. It's not difficult. This name or a butterfly. Why is this butterfly call it behaves differently if I compare the single coil or a butterfly coil, I see a 3D rendering of a single coil which has a wide field over a larger area, which I can see over here.

The red area is where it works the strongest, and it's spread out over here. But I'm interested in this area, so this was the, area in the brain I actually wanted to treat for, depression.

So when I use a demo and a coil, I figure eight coil or a butterfly coil, I get a different spread, a deeper penetration between where the two cones, which are actually built in a very special way, meet each other here.

This area is more even area more concentrated, of course, that you can see over here. It's more spread out. So this is the applicator of a, I prefer preference for treating, with high intensity, for instance, Parkinson or depression, which is FDA post high depression.

And in the other areas which are being evaluated as well. So that's why I wanted to point out the applications of butterfly coils as well. Now, how does it work?

Because when we go back over here and I want to treat this area, I don't know where to find it exactly. So there are ways to find it, because in this area of the brain stimulation, then I can see a visual movement of my fingers.

Or so when I stimulate the area in the middle, more or less in the middle of the brain. And then I know more or less the distance between this area and the area I want to treat.

Actually, this is called a mockery vocal potential, which I'm applying a one pulse and I want to see them with the patient actually moves with them or a finger as a response.

And then I know it's around five centimeters, a little bit more to the center of the brain, the area I need to treat and what how does that happen? Because this area corresponds with the motor neurons to go through the peripheral nerves via the muscle inside the finger showing your thumb.

And you can also see it. And for instance, if you take our virtual flesh device and you use the smaller pen, or you form the larger coil into a butterfly cone and you put it under your arm, you can actually see the movement because it's a very high intensity movement in your hand. All right.

But I don't want to promote any specific action at the moment. So let's go to the next one. This is okay. This is, the pulse way of how the FDA approved treatment of depression with a ten hertz intensity of heart complaint.

You heard of the effect of movement of my, thumb when I and I did the MPD and motor control, movement. Let me back up for one second. I think what you said about stimulating the muscle you're stimulating with the flash, you're stimulating the muscle directly through the nerve fibers that control the muscle. Yes.

In the rtms situation, they're stimulating the brain, the cortex that then sends, as you said, sends a signal down. So this is more indirect, whereas this is more direct.

Correct. When you put it on your arm, it's a direct, firing of the, motor neurons and a which actually have the effect, the same effect, as if you think of stimulating simply, directly the, the muscles inside the forearm here.

You have a different reason why you want to find the area, because we know more or less the distance we need between where we can stimulate, the, when we can get the, the maximum potential for a movement of the fat, in, in the patient.

And then we know where that, again, is an approximate. Yes. That approximation of stimulated the motor cortex. And you say, well, that means that probably we're going to produce enough energy in the brain if we move it to the front part of the brain, where we're going to stimulate the cortex, we know we have enough energy, then.

Absolutely. And we increase damages on the TMS machines. They, set a certain level of obtaining the effect and the movement of itself, but then you can increase the the intensity.

This up, we are going to treat the depression in a different area, which you cannot do when you are, because I think I, I attended the training for some few minutes and I had my head stimulated and my whole life actually went okay.

When you simulate more to the back side of my face. Yeah, right. And what it was interesting, but also a little bit scary through, if I may just interject for one second before you go to the next set of slides.

Rtms was designed largely to replace ECT. Yes. Electroconvulsive therapy. Yes. That's why they're so interested in using charge and a specific amount of charge, because you're trying to replicate what you do with ECT, which is more or less barbaric.

It's electrocuting somebody. Yeah, it's it's like verbalizing wouldn't have a life. Yeah. This is this is not electrocution. This is magnetic induction.

But but that's the history behind it. But they've also shown significantly in many, many studies now that that stimulation to that motor cortex, even though it's electrical there, the magnetic field still goes through the rest of the brain.

Right. And that means it's still going to produce all kinds of other changes downstream from the area. From the left. The main focus of electrical stimulation.

That's it. That's another discussion. Yeah. Yeah. You put your finger exactly on the very sensitive point. When you talk with experts in the field of TMS, because when you ask them, how does it work, why you think you use one hertz, why should you use it?

Or why even some words for treatment of depression? Why do you use the left side of the brain and not the right side of the brain? And when this question was put during response to one of the, lecturers over there with the world famous expert and TMS, Professor Fitzgerald from Australia, he said, we don't know.

We simply we don't know. And exactly what you said, this is true. He said, maybe if he put it on the right side of our brain, it will have the same effect.

But we don't know. So I'll tell you why. Yeah. It's, it's, there's a, a law in Islam. And, fable. Okay. All right. And the fable is somebody is walking down the street and looking at somebody who's looking under the light for something.

Okay? The guy who comes up to the person looking at the light says, why are you looking here? But what? Why are you looking here? He said, well, I lost my key.

Well, where'd you lose your key? Well, over there. But why are you looking here? Because this is where the light is. Yes. Right. So what we're doing is we we have a theory and everybody based on that theory.

And then that the science follows that everybody based on that theory says, well then that's all there is, which is clearly not true. You're 100% right. Absolutely.

And it's a very interesting, application of electromagnetic fields, for range reason. It's only a pity that nobody explains it or nobody can explain how it exactly works, but it works.

And that's the interesting thing. So that's why it also takes a long time to get FDA approval. For the EMF, because you have, to show it works, right?

You can't explain it to them. And, that's sometimes the reasons why aspirin works, either. Why aspirin works. Yes. We have some theories about why aspirin works.

Okay. All right. But we don't know for sure why aspirin works or how it works. But those theories are what causes it to be approved. We know it has more effects than just the one theory.

The 50% placebo effect was that to, Sorry to interrupt. No, no. No problem. Okay. I just wanted to point out there are also small battery devices, which use very smart cords which have a diameter of two inch, five centimeters.

And, the electromagnetic field is very, very much inside this area and not so much outside the area for reasons I already elaborated before. But there is one problem.

If you have two coils and you use them, two close together and you don't know in what direction the electromagnetic two goes, you get opposing fields and you get a portion of the fields.

So sometimes that's not explain to people, and it's not in manuals or whatever, and you don't even know which side of the, because the right side. So you need to be very, very careful.

Some call it Helmholtz. Cause but that's wrong. These are how it's called now, mods, cause they create an even feel inside two corners. He added two cords horizontal.

And this is very nice. Even electromagnetic fields. Correct those. I have more time, but there are certain laws and not in mention. Helmholtz was in a German, scientist, and these quotes are called after him, which means that the half of the diameter half of the emitter must be exactly between those two holes in order to create this field.

And if they are not exactly at half the diameter, if I have a two inch corridor and this distance is not exactly one quarter inch fans, it's two inch when you place it on the shoulder or three, and even on knee, you don't get a nice even field and it it and a bad luck.

TMS, Depression, and Brain Stimulation

This might even happen. You get repulsion of fields. So that's why I wanted to point out that using two coils, one opposite the other is not always wise thing to do.

Okay, this is my last slide because it shows what we are doing. This is the home therapy system which I mentioned before. It's sometimes not necessary to give us, on the whole body bag and a 20,000 microcosmos, 200 gauss on the smaller part.

It's a universal system. It has very steep rice times, dipped and it's, high intensity. It's the basic high intensity, machine we manufacture, which, you sell as the parameter machines, and it's also called the correct translation.

Then you have the machine time in line, which you also like, to recommend very often, which is the XPS or the grow a device. Which is higher power. Also more appreciate the possibilities.

Even faster ice times, different energy possibilities. Then we have a similar system like this, the PC system, which you can hook up to a PC, create your own, your own programs, your own protocols.

We including your own. And here there's new neuro programs and now available your programs are available in scientific software. And then we have these three system have eight cores inside them.

As I showed you on the, on the metrics pictures. And this is the 3D of our system, which has the two very large files inside them, and they create five from $1.55 packages, with large body metrics, and on a very small butterfly call in $1,600 or even 165 applications, this is top of the line system.

And those are true oscillating energy medicine devices. Then we have the high intensity impulse devices, which is similar to spark up systems on without the spark.

But this solid state technology, which is the flash multi system, which creates up to 4000 gauss, very small. So very small pulses, not energy, medicine, but high intensity, impulse device.

And then the premium flash device, which can create over $7,000. And with this one, for instance, you can see if you fold the, loop into a coil or if it moves the smaller amount, you can see the reaction when your simulate under your arm and you can move your hand, see movement, you can hang the ring or the loop around your neck, and you see the muscle movements in your shoulders.

But that's, these are the two lines we manufacture so that have why? Choice of different devices. You can offer to your patients. And this, this. I don't show you money away when the money paid.

But what's important. And that's what we actually talked about in the beginning. Penetration depth, the high intensity is required for PMS devices depends on a the diameter which I explained and I show to you in the movement of the electromagnetic fields, picture before where I increase and decrease the current inside the core and change the sizes of the current itself, penetration depth on the GPU, or the speed of reduction of the electromagnetic fields in the shortest possible time, which is expressed in Tesla per second.

It depends on the field intensity which this magnetic flux intensity and the field density, how dense the magnetic flux inside the corners. And the more the larger the core, the more flux density you can contain.

Provided that you use course with the diameter of each individual wire inside the coil to carry the current. Oh, I wrote twice the same. Sorry. The purity of the coil, the purity of the copper inside the coil itself is very, very important.

The amount of turns inside the current, because each term gives a certain amount of energy, of intensity. So the more terms you have in the core, the more field intensity you will get.

But the more things you have, the higher the resistance of the core, the higher the resistance of the coil. It becomes more difficult to have sufficient current running through the coil itself.

And that's why you need also sufficient electrical current. So you can't just say, okay, I need to take a thin wire. I make as many, many terms in the coil as I want to because then the the core cannot carry sufficient current in order to, to generate sufficient magnetic flux, magnetic intensity.

So it's it's not just one thing. It's a combination of many different, electro technical electronics in order to be able to generate sufficient intensity to penetrate completely the body and to obtain the right penetrate from this inside the tissue, inside the cells, to obtain opening of the cells, to penetrate the bones, for treatment of osteoporosis, to treat osteoarthritis.

But now that was good a very good. Thank you. It gives us your history. A good explanation about those the factors that are important in designing a system.

And that's one of the key things that I want to make sure that people understand. Every magnetic system has value. Doesn't matter, doesn't matter who makes it, doesn't matter what it is.

Even these very, very low intensity systems have some value. Yes, but it depends on one's goals and objectives. Okay. Right. As you said, if you're trying to treat deep into the brain, then you're probably going to have to have a lot more intensity to deliver enough charge into the tissues to do the job that you're looking to do.

Same thing applies to the heart or to the kidneys or deeper into the body. So those are important factors. And what what I'm trying to do basically is get people understand.

Yes, you're going to make a choice about a system, but you have to understand the system to know what it's going to give you. And unfortunately, what I find too often is that people make their choice based on cost.

Right? I can only afford $700 for a system. Well, you're going to get $700 worth of value from your system. Yeah, if you're wanting a $700 system to do the work of a $10,000 system, you're not going to get it.

But the problem is built that often when they buy a cheap system, they're disappointed in BMS and they. That's wrong. And, that's why your advice is so important.

So to make them understand that if they buy a $700 system, right, they get something, but they should not be disappointed if they don't get the effect they expect from a $700 system.

You can't you can't call or buy a disappointed with one particular pump, right? You could even buy 2 or 3 different very high cost systems and still be disappointed because often they still depends on how you use it.

So there are many people who are advertising eight minute treatments with your very low intensity system. So how much change in the body is going to happen with treating for eight minutes with very low intensity, especially when you use the same signal only and not have a very steep debility.

And one of the things that I do in my book, and I think, you and I have had some of these discussions before, is I review the science, not just the physics of it, because that's less important to most people.

What they want to know is what will it do? How will it help me, and how do I use it? So the key thing is to understand there is science and the science is all over the place.

If you look at and I in the book, I have 50 different health conditions and I review the science that's available for those health conditions. There is no one system that's used across all of these health conditions, so you can't compare often from study to study to disease to disease, condition to condition.

That's why, again, you have to have an understanding. And that's why we're doing this video is for you to teach people as well about some of the engineering aspects and the theoretical aspects of a system that you still have to know how to apply it and to use it to use it properly.

The problem is that there are many, many studies out there. We choose either a specific frequency or a specific intensity. And the, people or the. Yeah, your colleagues even really say so who don't understand what's involved.

What is the speed of infection? What is the duty cycle? What is a deep what is the, intensity? They publish peer review studies, whereas the data is incomplete because they use very limited, electromagnetic field, intensities.

And that's, very good.

Choosing the Right Device and Final Thoughts

I find it disturbing because, you don't know what conclusions lay people are going to a to get from these kinds of studies. And I think that's a biggie.

So it's very important. When you look at a study to know exactly the density of your mathematics being used, the size of the course, and the penetration of that, and if it's only fixed one frequency or if they are using several different frequencies, which being applied one after the other, because to avoid a doc adaptation of the body, you mentioned the system which said, okay, eight minutes.

Use and then your body gets adapted to the specific frequency. You need to change the frequency during the treatment. And if you don't do that, you don't get the optimum results.

And I don't know what your opinion is, but I have seen tables many tables of, of of, of so-called scientific studies. You say liver, this frequency, heart this frequency.

You know, I have a problem with those studies because who knows? Wow. How can you prove this? Well, what happens is, unfortunately, those studies didn't compare all the parameters together, right?

So they didn't have one system that varied the intensity, another system that varied the frequency, another system all basically targeting the same objective.

Yeah. So the number of variables that could, have to be considered in designing a system, when you multiply all those variables out, you're talking about millions of combinations of possibilities.

And that's never going to happen in a research. Yeah. So we read it. We rarely know how one compares to another

for the same problem or the same need.

Right. So we get close. What you do is you get a system, you use it, you find out what what it's going to do for you. Right. And then you have to adjust.

So I say that in an ideal world, if you had all the money that you could ever want or even money that you don't need, you probably would end up only 4 or 5 different systems.

Right. To to get it, to get cover the waterfront. But the possibilities that could be needed. Well, there are people out there who claim they have spent hundreds of thousands of dollars on the different systems.

And then we sell one system. And that should be then, the only ultra system which is applicable for all different possibilities. Okay, doesn't exist now and again, if you read the book.

Can you read the 50 health conditions that I review with the science or research behind them? With all the flaws of the research and all the fact and the fact that most studies, as you said, don't give you an adequate description of the signal in any way.

So you're still left with some guesswork in terms of what you do. A lot of guesswork, actually. There's one technical question I have for you. We focus on the coil and we focus on the, the basically the configuration of the field in the center of the coil, but the coil and this if I, with me, if I got this wrong.

But at the coil itself is where the magnetic field is the strongest, according to my measurements, you're 100% right, right. Like you showed that volcano slide right at the coil is where the field is the strongest. So.

Right, right, right at the coil itself. Now, when you move away. But you if you're laying on a coil with your body on it, a big area, you don't have one big coil usually have, as you said, multiple coils.

So I will often direct people to put a shoulder right over the ring of the coil. If you want to get higher intensity for that particular application, that's when you're treating deeper into the body and you want to spread the field out.

Then you lay on top of a circular coil. So measurements at the edges of the coil and measurements above the surface of the coil are very different. And thank you so much. It was very, very educational.

I really appreciate your slides. More education of, of of people getting good science and not just selling a particular device. Well, do I have most? And I'm happy that you, are able to educate people because I think it's really necessary.

And they there are so many, people out there in the field who, I simply salespeople and have no clue what they are selling or they claim they know because they are whatever educated, and they lack a lot of knowledge and they are, biased towards the specific device they sell.

And that's the advantage you have. You have a lot of different devices. You have chosen to pick to only those devices you think are, and the most useful.

And I completely support your efforts. And I think you, and I on the right by educating people. And I appreciate the work. Well, thank you. And we appreciate your equipment as well.

Yeah, we know we know that it works. And I'm glad that you added, broadened your line to include the higher intensity system. There's still debate about whether high intensity heals.

You said the frequencies are energy medicine. I would disagree with you there. Given the high intensity energy medicine. You know, you have this device that you're treating the brain motor cortex, and it's going to deliver energy, create charge production in addition to the electrical induced electrical field.

But is that the only action of the magnetic field? It isn't. Now there's a lot more going on. It's not that we have still a lot to learn, and most of that will be from applying it and using it and understanding.