Mind-Matter Interaction – Doorway to Scientific and Personal Evolution.

Introduction

50 years ago, Helmut Schmidt published articles describing experiments meant to show the possibility of mentally affecting the generation of truly random events, specifically the timing of nuclear decay. Since then major research projects spanning decades have produced enormous databases of test results. Analysis of those results indicates with very high statistical significance that Mind-Matter Interaction or MMI is a real phenomenon.

Helmut Schmidt, PhD

In spite of the evidence and the publication of hundreds of research papers, MMI has been almost entirely ignored by both scientists and the public at large. Recently, MMI has gained unprecedented public exposure, most notably through an application known as Randonautica (launched February, 2020). The apps designers proposed that a player's mental intention to have a certain experience affects the production of random bits, which are used to produce map coordinates near the player's location. The player then travels to and explores the location to discover if something found there correlates with the intended idea. The specifics of the app are not as important as the fact it became a social media event. As a result, MMI was "discovered" by mainstream news media and public interest soared.

What is Mind-Matter Interaction?

Mind-matter interaction is the idea that focused mental effort can affect physical events at a distance. MMI also refers to the study and development of theories and technology based on an influence of mind over material events. In contrast, Man-Machine Interaction or Brain-Machine Interaction are very different than Mind-Matter Interaction. Though the terms seem similar, Man-Machine Interaction requires physical measurement devices connected to a person to provide signals for use. There is no direct interaction of mind with a physical device.

Mind-Matter Interaction can refer to a broad range of experiments, such as affecting the roll of dice by mental intention or the interference pattern in a double-slit optical experiment. Micro PK is the alteration of probabilities in measurements at the molecular or atomic level by mental intention. This usually refers to influencing the production of ones or zeros when an entropy source is sampled to produce random bits. MMI based on hardware random number generation is

a primary focus because devices are relatively easy to reproduce and use in a wide variety of experiments and applications.

What is the significance of MMI and why should we be interested?

In quantum mechanics an observation is essential to convert a quantum possibility into a particular physical reality or fact. Yet our understanding and interpretation of quantum physics is not sufficient to define the role of consciousness in that process. Conventional "wisdom" in scientific circles is that mind doesn't even exist. Mind-Matter Interaction is an objective way to explore the meaning of mind and consciousness and how these produce our physical reality.

MMI provides a platform to develop applications that are literally impossible using traditional technology. These include the ability to obtain information that is not computable using the most advanced computers, or the possibility to communicate mind to mind or faster than the speed of light.

Daily experience does not prepare us for the oddness of quantum theory that may explain how MMI actually works. Indeed, suggestions of the even stranger *temporal non-locality* by no means provides an adequate explanation. MMI allows objective experiments to reveal and develop new and potentially world-changing science.

Long-term practice with MMI training applications has been shown to produce persistent changes in individual mental abilities. MMI provides a new approach to increasing peak performance and learning to become *luckier* by shifting probabilities in real world situations.

What is an MMI Generator?

A fundamental component of MMI work is the hardware generator meant to respond to an influence of mind. This is sometimes called a random event generator or REG. However, a REG is just a hardware random number generator with more or less defective randomness statistics. A more advanced concept for an MMI generator is a MindEnabled® device (MED), specifically developed to be more responsive to mental influence. A MED is superior to a REG in a number of ways:

1) Theoretical modeling shows certain entropy sources are more or less responsive to mental influence. Avalanche noise in a Zener junction is usually the least responsive and thermal noise is typically more responsive. The entropy source in a MED is carefully modeled and compared with other generators to achieve the most responsive basic design.
2) REGs produce biased data that is usually "corrected" by deterministic postprocessing. That is, it is mixed with pseudorandom sequences, which only obscure the defect in entropy of the raw sequences. MEDs use only entropic bits – without deterministic postprocessing – to produce the final output. Their statistical properties are fully modeled and are unbiased by design and verified by direct testing.

3) MEDs include two types of nondeterministic processing shown theoretically and by direct testing to produce more responsive results.
4) Some generators (and indeed some online providers) use a true random generator to seed a pseudorandom generator and then produce a large number of output bits. The true entropy of each output bit is the number of input entropy bits divided by the number of output bits generated between each seeding. This may be called a REG, but it is extremely inferior to a MED that provides effectively full entropy in every output bit.

Early Shot-Noise-Based REG

Figure 1 is a block diagram of an early Princeton Engineering Anomalies Research (PEAR) REG design using the Elgenco noise module, Model 3602A-15124. (Note, Elgenco is now defunct.) The entropy source is likely a Zener diode or reverse-biased base-emitter junction operating in shot noise mode (reverse breakdown less than about 5-6 volts).
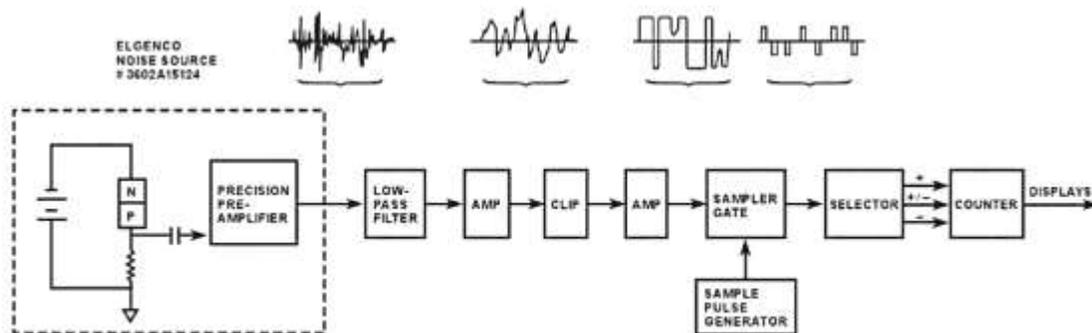
Benchmark REG function diagram.
Fig. 1

Each version of PEAR REGs typically included a high-pass filter at 1 KHz and a low-pass filter around 40 KHz (provides -1 db at 20KHz), effective bandwidth = 61.26 KHz. That yields a noise voltage of 495 µV rms, or 2.97 mVp-p. Total external gain (outside the noise module) of 2 to 4 thousand converts the signal into more or less square waves for random bit sampling.

Ring Oscillator-Based MMI Generator

A MMI generator, Model MED100Kx8 (Figure 2 – shown actual size), uses an Intel EP3C5U256C8N FPGA (large chip in center of board).

Fig. 2

The entropy source consists of 8 generators operating at 128 Mbps for a total generation rate of 1.024 Gbps. Each generator consists of a number of rings with 141 data taps XOred together to produce 8 outputs for bias amplification. 10,201 bits, on average, are presented to random walk bias amplifiers for each internal generator stream. The resulting 8 outputs at 12,547.79 bps each are combined in a parallel in serial out combiner. The resulting total output rate is 100.38 Kbps.