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SECURED COMMUNICATION GENERATION USING OPTICAL SOLITON PULSE

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ABSTRACT

The communication security is established by registration during the first acuity and communication between two people, which is kept inside the human brain space eternally. Moreover, the quantum flip-flop signals can also be generated via a ring resonator and soliton pulse. So the transmission bits security can be secure transmitted in the telepathic communication.

Keywords: Telepathy; Telepathic communication; Telepathic security; Telepathic memory

INTRODUCTION

Telepathy is used to control the brain functions, scan the memory of other people, receive and transmit the thoughts directly between two people without any physical means such as vocal or auditory mechanisms.Telepathy occurs across space which appears in several forms among various races**[1]** with a vested interest to learn the memories of other species and improve or recover lost memories.

Some communication can exchange thoughts only with others of their own species and some can send but not receive and vice versa**[2]**. Betazoids, for one example, can send their thoughts only to other empathy and telepaths, but can receive

thoughts and feelings from almost any being's mind, psionically gifted or not **[3]**. In some races, telepathy present in all healthy individuals. However in some species, such as Humans, telepathy is infrequentand certain species, notably the Ferengi, never telepath **[4]**.Telepathy makes possible some forms of interaction that would otherwise be impossible **[5]**. Miranda Jones has established a telepathic link with Ambassador Kollos **[6]**. Telepathic races such as the Betazoids and Vulcans usually improve a moral code which precisely dictates under what circumstances such powers may be used. Vulcan telepathy, though, is more limited, usually practiced in the form of the mind meld, coupled with Vulcan logical and mental conditioning **[7, 8]**. Signal pulses of microwave could be heard by some people as"pops" or "clicks", while a train of uniform pulses could be heard as a buzz, without benefit of any type of receiver **[8]**. A wide range of frequencies, as low as 125 MHz can be worked for some combination of pulse power and pulse width. Detailed unclassified studies mapped out those frequencies and pulse characteristics which are optimum for generation of microwave hearing.

Secured Communication Mechanism

The scanning image information is recognized by million brain cells and is addressed within the brain memory by many layers and sub-layers in the brain cloud computer **[9]**. The image recovery is realized by comparing the image pattern recognition, in which the probability of image pattern projection as the identical image probability is the criteria of recovery and conclusion. The projection of coherent signals brings the decoherent states, while the collapse of waves realizes the necessary results. In electronic mind control, the required pulse peak power is about 3 $W/cm^2$of skull surface which is applied or needed for a very small percentage of each pulse's cycle time. 3 W/cm^2 is power obtained under a 250 W heat lamp at a distance of one meter. When the pulse train is off for most of each cycle, the average power is so low as to be undetectable.This concept known as "spike" waves which is used in radar and other military communications where the frequency acts as voice-to-skull carriers are not single frequencies, in same way as for TV or cell phone channels. Each sensitive frequency is actually a range or "band" of frequencies. A method used to reduce both interference and finding is named "spread spectrum". Spread spectrum signals usually contain the carrier frequency called "hop" around specified band. The spread spectrum signal is received on a spectrum analyzer which appears as "static" or noise. The successful unsystematic voice to skull

experiment has been performed in 1974, by Dr. Joseph C. Sharp and Mark Grove at the Walter Reed Army Institute of Research **[8, 10]**.

A Frey-type audible pulse is transmitted every time as the voice waveform which is passed down through the zero axes. The sensation is reported as a buzzing, clicking, or hissing which seems to originate within or just behind the head. The phenomenon occurs with carrier densities as low as microwatts per square centimeter for carrier frequencies from 0.3 to 3.0 GHz. By suitable choice of pulse characteristics, the intelligent speech can be formed. **Figure 1** shows the schematic drawing of the input pulse imaging system based on nonlinear nano ring resonators. The spectral domain pulse-shaping technique is definedin schematic diagram.

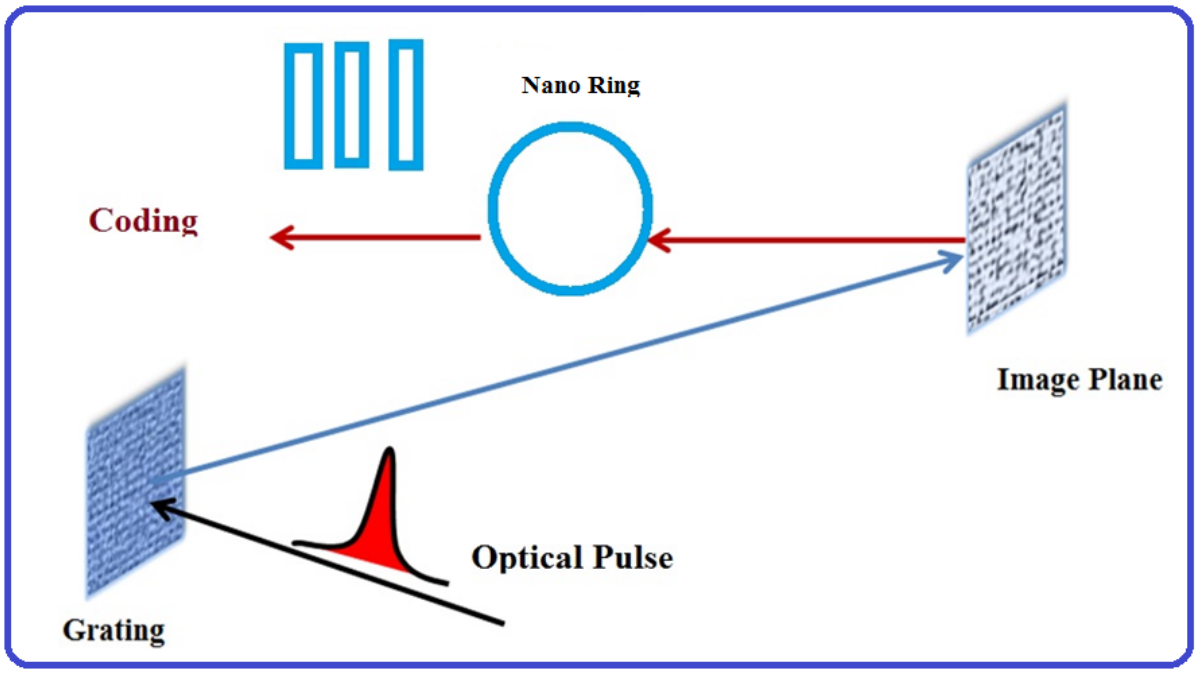


Figure 1: Schematic diagram of the femtosecond pulse imaging system based on nonlinear nano ring resonators

Function of System

The proposed system decomposes the transform-limited laser pulse into the spectral domain and modified the pulse spectrum using a one dimensional fixed or programmable spatial mask or hologram. The modified temporal spectrums are then recombined into the time domain. Foran input pulse such as a Gaussian pulse without information, The input optical field in the form of Gaussian pulse can be expressed as **[11-14]**.

$$E_i = A_i \exp[\frac{z}{2L_d} - i\omega_0 t] \ldots\ldots\ldots(1)$$

and an output pulse from image plane

$$E_s = A_s \exp[\frac{z}{2L_d} - i\omega_0 t] \ldots\ldots\ldots\ldots\ldots(2)$$

where the amplitude of optical fields are represented by A_i and A_s. The propagation

distance is demonstrated by z. The propagation time for soliton pulse moves at the group velocity in a frame is $T = t - \beta_1 \times z$. Here, t is the soliton phase shift time, and ω_0 is the frequency shift of the soliton. $L_d = T_0^2 / |\beta_2|$ represents the dispersion length of the soliton pulse, where T_0 shows soliton pulse propagation time at the initial input. The coefficients of the linear and the second order terms of the Taylor's expansion of the propagation constant are β_1 and β_2, respectively. For the soliton pulse in the micro ring device, a balance should be achieved between the dispersion length (L_d) and the nonlinear length $L_{NL} = 1/\Gamma\phi_{NL}$, where $\Gamma = n_2 K_0$, is the length scale over which dispersive or nonlinear effects alter the beam diameter. For a soliton pulse, there is a balance between dispersion and nonlinear lengths, hence $L_d = L_{NL}$ **[15, 16]**.Consider a pulse produced by the pulse-shaping device isincident on the first reflecting grating of the pulse imaging system as shown in**Figure 1** at an incidence angle φ. The grating is arranged suchthat the first diffraction order for the spectral component at the center carrier frequency ω propagates into the direction of the optical axis of the system. As the pulse arrives at plane 2, a single spectral component of the incident field at an arbitrary frequency ω is produced in a diffracted field. After plane 2, the pulse carries information from image which is then converted into telepathy using single ring resonator**[12, 17-20]**.

Based on the coupling coefficient of nanoring resonator (NRR), a fraction of input soliton pulse is coupled into the NRR. For long dispersive path, E_i causes the nonlinearity effect built up inside the NRR due to change of the refractive index with optical power. Here, the power dependence of refractive index is responsible for the Kerr effect **[21]**. The refractive index can be writtenas**[12]**

$$n = n_0 + (\frac{n_2}{A_{eff}})|E_s(t)|^2 \quad \text{.....} \quad (3)$$

where n_0 and n_2 are the linear and nonlinear refractive indices respectively and A_{eff} shows the effective mode core area of the waveguide. In each round trip a phase shift of $\xi = \exp(-\alpha L_i/2 - iKnL_i)$ is added into the soliton pulse while propagating via NRR. One round trip loss coefficient isconsidered as $x = \exp(-\alpha L_i/2)$ where L_i is the circumference of the NRR and α is the waveguide absorption coefficient. The vacuum wave number and refractive index of the wave guide are represented by *K*and*n*, respectively. The pulse passes through the NRR and input soliton pulse after each roundinterfere with each other. The optical outputsfrom the first ring resonator is given as**[20, 22, 23]**:

$$E_{out}^{1} = E_s(\frac{C_1 - (1-\gamma_1)\xi_1}{1 - C_1\xi_1}) \text{ ……..(4)}$$

where $C_1 = \sqrt{(1-\kappa_1)(1-\gamma_1)}$ is the fraction of input pulse coupled to the NRR, κ_1 is the coupling coefficient of the first ring and γ_1 shows the fractional intensity loss of the first coupler. The output pulse from each MRR in proposed system **(Figure2)**is fedto the next NRR. Theoutput pulse from a system of N nano ring resonator can determine as**[24]**:

$$E_{out}^{N} = E_s\prod_{j=1}^{N}\frac{C_j - (1-\gamma_j)\xi_j}{1 - C_j\xi_j} \text{ ……..(5)}$$

The output power from each ring can be determined as

$$P_{out}^{j} = (E_{out}^{j}).(E_{out}^{j})^{*} = \left|E_{out}^{j}\right|^2 \text{ ……..(6)}$$

RESULTS AND DISCUSSION

In order to generate telepathy pulse a Gaussian pulse with power at 5 W is fed into the system as shown in **Figure 4(a)**. The nonlinear refractive index of the system is fixed to n_0 = 3.48 and the nonlinear refractive index is $n_2 = 4.2\times10^{-17}(m^2/W)$. The waveguide loss and coupler intensity loss are α= 0.2 (*dB/mm)* and γ = 0.2, respectively. The coupling coefficients of the micro ring resonator vary between 0.1 to 0.5. The effective mode core areas of the nanoring resonators are varied in the range from 80 to 100nm^2. Radius of nano ring is 50 nm. **Figure 2** shows the schematic of telepathy pulse generation and Figure 3 shows the Scanning electron microscopy images of nanoring resonator with radius R = 50 nm. When the input optical pulse meets the resonance condition of each nanoring resonator, it couples to the ring and travel around inside it. Here telepathy pulse can be achieved based on the normalized pulse and resonant mode numbers of nanoring resonator optical pulse affects as constructive and destructive interference. Therefore, the signals are suppressed over frequency interval and the overall intensity in this frequency domain is amplified according to the superposition principle. Since the energy per area for optical breakdown decreases with the pulse duration which isrecognized with lasers operating in the telepathy pulse duration regime.Here the pulse is sliced and amplified into a smaller signals over the spectrum as shown in **Figure4(b).Figures 4(c), 4(d) , 4(e) and 4(f)** shows the normalaized telepathy pulses in several roundtrips rangewhichare suitable for telepathicmemory and secure communication.

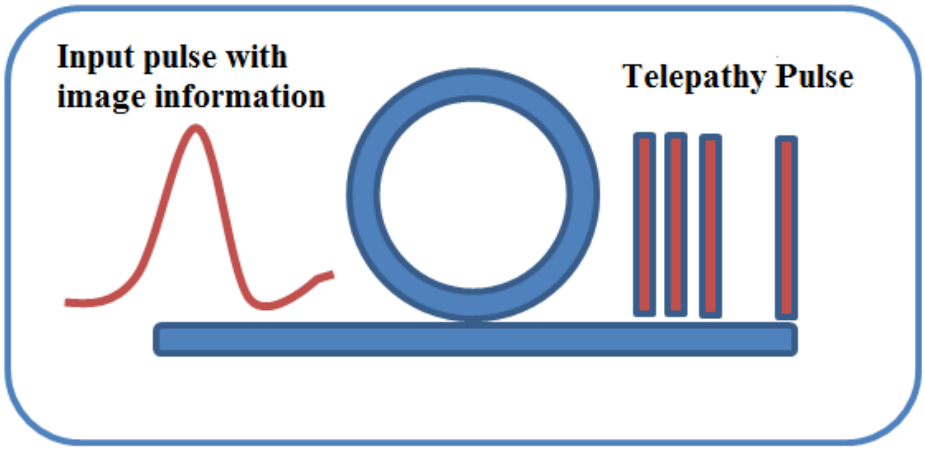


Figure 2: Schematic of telepathy pulse generation

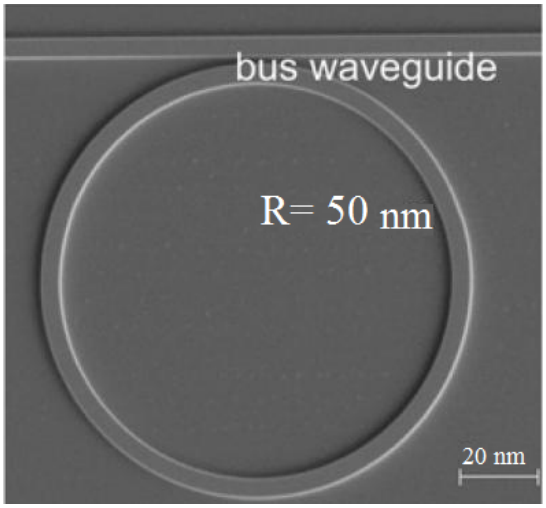
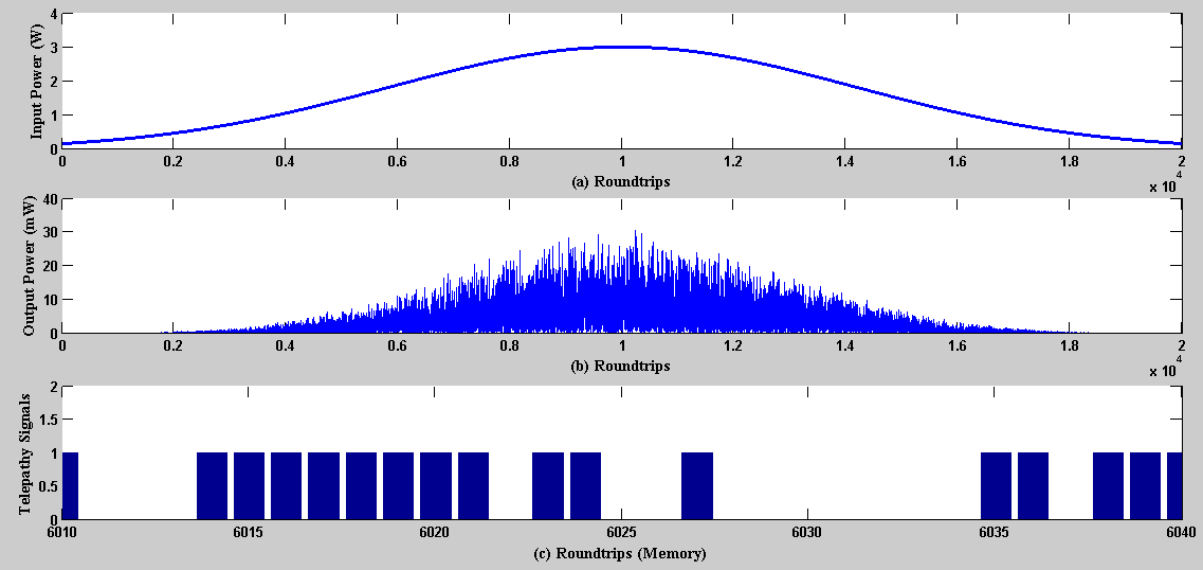


Figure 3: Scanning electron microscopy images of nanoringresonator with radius R = 50 nm and enlargement of the coupling region between the waveguide and the ring.



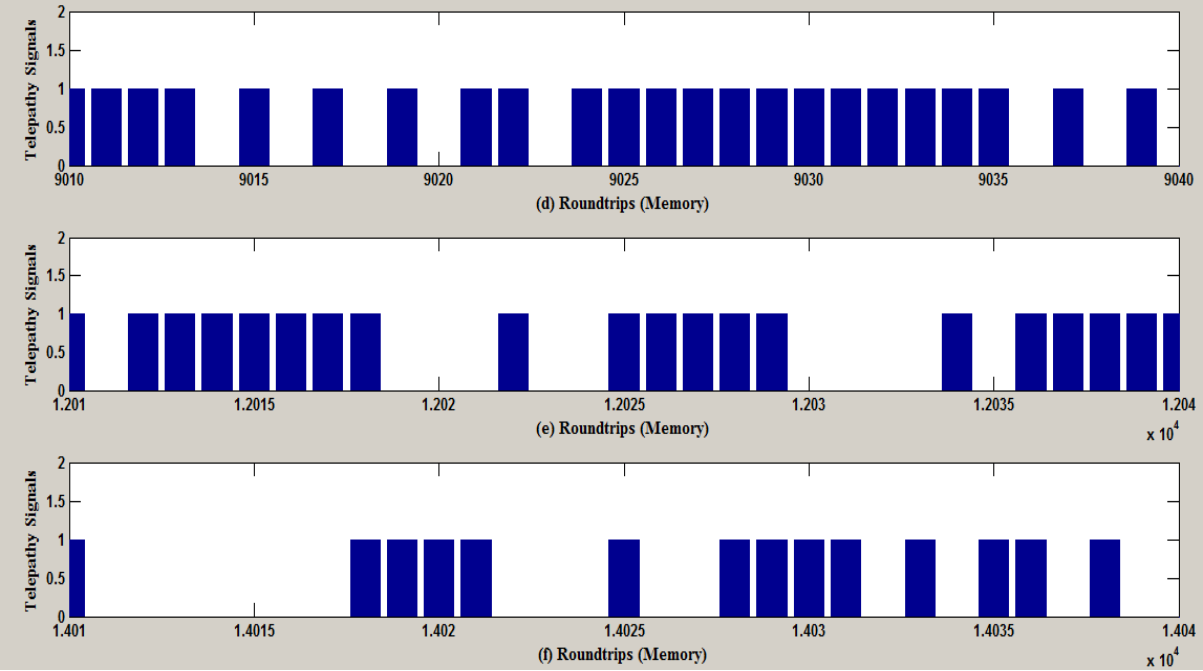


Figure4: Result of the output signals from proposed system where (a) shows the input Gaussian pulse, (b) the chaotic signals generation, (c), (d), (e) and (f) show the normalized telepathy pulse in several round trips range

Two telepaths may combine their talent to make a secure communication channel between them. In this case, the skill needed to break the security is equivalent to the product - multiplication - of the two individual skill levels. Evidently, when three or more skilled telepaths form a secure link, it becomes very unlikely that any one individual will be able to break it. Synthetic telepathy covers mind reading, and secured communication. This in turn would allow us to search our own memories not just those on the Web with something like the efficiency and reliability of a computer search engine.

CONCLUSION

Secured communicationis the art of electronically transferring thought directly to and from a brain. The primary objectives are to expose technology that can provide point to point communication from one brain to another, to localize unwanted sources of telepathic communication, and to provide evidence that technologically implemented telepathy is possible. Technology to block unwanted voices is being investigated. A key objective is to prove the existence of criminals who abuse existing synthetic telepathy technology. Further objectives include investigating other computational substrates than brain tissue. www.cyberbrain.se is also interested in marketing existing synthetic telepathy technology.

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