The Invention of Natural Encryption (NET), Dots and Pixels Technologies and ideas E2E encrypted Apps on Wireless and Smartphones

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Abstract

I presented the ideas for End-to-end Encrypted Text Messaging applications which paved the way to encrypt the whole digital or analog signal cent percent secure as the data and information to be transferred and received not sent with pulses in the transmission medium (air, wire, cable, atmosphere, space) in digital or analog form vis-à-vis Apple iMessaging, Signal, Telegram, WhatsApp, and Viber etc latest encrypted systems in the market.

This paper is consist of Three parts: First is based on my invented IT technologies that are Natural Encryption Technology (NET), Dots Technology, Pixels technology, and their related Apps. NET Apps ideas based on the Natural Encryption Technology (NET) provides a unique solution for cent percent secure sending and receiving of SMs or digital data through the Intangible Time Medium by encoding and decoding of data with time via beep sound or breaking signals. The encrypted text digital signal / pulse travel medium is Time or Time space. The NET secures transmission side perfectly by transforming it data free that is if the hacker or interceptor is succeeded to hack or intercept the digital signal will not be able to get any data because signal contains no data and information but encrypted interval of time and beep sound. The NET Apps create Information Black Holes (IBHs) to protect the data and information perfectly and ideally.

Dots Technology: Digital pictures / video Apps transfer data in the form of pictures of encoded dots of different colors or Data with color cubes or pixels colors Hexadecimal numbers simply via common digital pulses are used in mobile phones communications.

Pixels Technology: The technology based E2E encrypted Apps ideas explained the pixels assigned with time coding to transmit pixels digital pictures and pixels videos to send and receive encrypted text messages.

Key phrases: Natural Encryption Technology; Dots Technology, Information Black Holes; Pixels text technology; Intangible Time Medium; Data Cubes

1. Introduction

1.1 The Natural Encryption Technology

The Natural Encryption Technology (NET) is the new technology invented by me. My all encrypted Apps ideas on text messaging /SMs software are based on the NET. The NET which is
based on the fact that time is a Universal physical natural quantity available for everyone in this Universe and there is no restriction to access it. Therefore, encrypting and decrypting of time interval technique can be used for sending and receiving of messages via digital / analogue signals by smart, wireless and landline phones. By the NET, data is not sent through digital or analogue signal but by interval(s) of time to be coded and decoded. The coded intervals of time are decoded by the identical software of their phones. Therefore, the data(text messages) can't be hacked or intercepted by any intruder.

The sending and receiving of data through the NET is similar to the divine messages used to send by God to prophets. That are revelation of the divine books the Tawrat (Torah) revealed to Musa (Moses), the Zabur revealed to Dawud (David), the Injil (Gospel) revealed to Isa (Jesus), and the Quran revealed to Muhammad (Peace be upon him) through God’s (Natural) method to transfer of data to the prophets that was hackers( Satan and jins) and intruders proof E2E secure data transmission system.

Therefore coding the time interval for text messages /SMs is the method to transfer and receive data from one end to another by smart/wireless/ landline phones without the threat of hacker or any interceptor.

1.2 Information Black Holes

By the application of NET we can produce "Information Security Black Holes" that is if the hacker or interceptor succeeds to hack or intrude the signal they can't be able to decrypt it as the signal is nothing but a sound of beep or a digital signal/ pulse for a short interval of time. Hence we can say that NET creates the

Information Black Holes to protect the data from hackers or intruders as no data and information is tandem with signal.

In fact, the Information super highway and information tunnels are failed or not performed perfectly to secure the data and information. Therefore, I presented the idea to develop Information Black Holes so as to protect the data and information with ideal security like the divine messages of God revealed to the prophets. That is Black Holes Apps are like the space-time or Universe or multiverse Black Holes where no hacker or intruder can’t hack or intrude the data.

The NET protects our transmission side perfectly and there is no need to encrypt the digital signal in transmission medium. Absolutely, the NET saves huge encryption budget for protecting transmission medium and signal. Because, if any hacker or interceptor succeeds to hack or intercept the signal the one can’t decode the coded intervals of time.

That is data and information are remains saved in the database in static state. Therefore, the Neo ISI Apps need to encrypt only Database side and for this purpose we can use the AES-256 and RSA-3072 algorithms etc.
2. **Encrypted Apps and Systems in market**

2.1 *End-to-end encrypted messaging apps:*

“VIPole offers the highest level of encryption for both communications and storage. A key feature is that it delivers complete, continuous end-to-end encryption. Other encrypted messaging systems either have only client-server encryption or use end-to-end encryption for special modes while, for the most part, data is not end-to-end encrypted. Likewise, VIPole encrypts both storage and network transfers, whereas many other systems only encrypt network transfers. Why is this important? In practice this means that even if a hacker or unscrupulous employee manages to exfiltrate data from within the network, they will not be able to decrypt it.

VIPole was designed for the high-level encryption of important files, but also of other sensitive data that other systems sometimes miss. For example, sent and received files and message history.

If a device is lost or stolen, VIPole’s remote device management tools can be used to wipe data remotely, and VIPole’s on-premises platform also gives system administrators fine control of security and encryption settings on individual devices.” ¹

Everything sent via VIPole is encrypted end-to-end using the AES-256 and RSA-3072 algorithms meaning only the sender and recipient have access to the data. That stretches to audio and video calls made in VIPole too. I’m no hacker, but VIPole claims a file encrypted in this way is useless to anybody that might get a hold of it.²

Use VIPole simultaneously on phones, tablets and desktops on iOS, Mac, Windows, Linux and Android. The data is synched across all devices. The desktop version is more rich-featured, offering multiuser audio and video conferences and calls to mobiles and landlines. The iOS version will gradually acquire this important features.³

Presently“ Signal, Telegram, Whats App, Snap Chat ,Line, Cyber Dust and Apple iMessaging are providing end-to-end encrypted messaging services. These all offer the option to send messages that remain encrypted at all times between two users' devices.” ⁴

2.2 *Why End-to-end Encryption?*

Without end-to-end encryption, communications over the Internet are typically decrypted when they reach the servers of the service provider. That means companies like Facebook can read your messages and hand them over to law enforcement, too. But companies that offer end-to-end encryption don't have the ability to unscramble user messages and provide them to the authorities.
While iPhone, Bluetooth, Black Berry, IOS, Kryptotel, eduroam, Campus VPN, The VME Cell™, TopSec and Android encrypted Smartphone and operating systems are also available in the market and providing the best encryption results with nominal complains.

Moreover “OpenPGP, Peerio, Hushmail, Mailvelope, ProtonMail and RiseUp are available for secure email services in market.”

“On April 19, 2016 Viber launched Viber 6.0. This newest version features end-to-end encryption on its app, following the lead of Apple and Facebook (via WhatsApp). If you’re unsure of what this means for you, then we’ve got you covered. Here are the top things that you need to know about Viber’s new security update.”

“The app offers stronger security in every voice or video call, message, video and photo, in both group and one-on-one messages, the company said.”

2.3 Viber’s Features

1. Encryption is end to end

Viber is implementing the encryption from end-to-end. This means that only the sender and receiver of messages can see the contents of the messages being sent through the chat. Viber can access logs of who conversed with whom, but they can’t access the specifics of the message. All they have is a record of conversations—without any idea of what those conversations were about.

2. It’s not rolled out everywhere yet

Viber’s testing out the encryption on four specific countries first. While those four countries have yet to be determined, this move is to give the developers a chance to see the encryption in action. Think of this as a beta testing phase for the upgrade, if you will.

3. The encryption tech is in-house—but that’s not a problem

This can be an issue for most individuals. Viber came up with the encryption with an in-house crew. Standard practices for encryption usually see the parent company involving a third-party developer in the project. Viber, however, insists that this isn’t an issue; the company has stated in their blog post announcing the upgrade that they obtained the help of a third-party, but did not disclose more details.

4. You can tell if your message is encrypted
The Viber app now has a way of letting you know that your message is encrypted. A lock icon underneath your message will tell you if your encryption is two-way or one-way. Two-way encryption between two users that are using Viber 6.0. One-way encryption means that the sender is using encryption, while the receiver is not.

### 5. Hidden Chats!

Viber is also implementing hidden chats. These are conversations that are not shown on the home screen of the app, and can only be accessed via a password specified by the user.

### 3.0 The Best Five Encrypted Tools

“ For those mobile phone owners that wish to take matters into their own hands, there are a range of tools that are available now.

1. **Gold Lock 3G**

Licensed by the Israeli Ministry of Defense, Gold Lock 3G aims to provide military-grade encryption for both voice and data communications.

It does not require VoIP capabilities and will automatically encrypt calls, file transfers and text messages, including internationally. This encryption works across cellular, GPRS and wi-fi.

The company boasts that it provides triple-layered security and the solution can be used on iPhone, Android and BlackBerry.

Founded in 2003, the Israel-based company employs over 30 specialists, including security software developers, tactical mathematicians and analysts. As well as providing its mobile encryption products, it also builds custom security solutions for several government and military organizations.

2. **Cellcrypt**

The company uses double-layer AES-256 and RC4-384 to provide a new key for each call or text message.

Cellcrypt has its own VoIP infrastructure, which allows the caller to use a low data rate. So that the calls don't hog your bandwidth, the calls use narrow band adaptive voice codec.

It operates over all major types of network, including mobile, satellite and wi-fi, and works on iOS, Android, BB10, Windows 8.1 and PBX. A desktop version is set to be available soon.

Customers will have access to Cellcrypt's secure PBX Service. This gateway integrates Private Branch Exchanges with the Cellcrypt NG-compatible end-point encryption. Cellcrypt NG-
enabled smartphones can connect to landlines and use functionalities such as voicemail and call-forwarding.

The Secure Conferencing solution allows multiple parties to connect securely on a secure conference bridge. Verizon is working with Cellcrypt to offer the Voice Cypher Ultra product.

3. KoolSpan

KoolSpan has a patented mobile encryption engine which authenticates and secures all communications.

The engine runs on standard smartphones and network-connected devices; the engine is run either in the native secure elements of the phone, or on a TrustChip microSD memory card.

It can also be run in Trustonic's Trusted Execution Environment, which is a secure area that uses the phone's application processor. The solution is compatible with Android, iPhone and BlackBerry phones.

4. PhoneCrypt

PhoneCrypt claims to offer military-grade encryption with RSA 4096 bit & AES 256-bit encryption. This is the same technology used by the FBI and CIA. It is an innovative solution based in military grade encryption which effectively protects your landline, mobile and PBX phones from access of intruders.

The software can run across internet connectivity through 3G, UMTS, HSPA, W-CDMA, EDGE, GPRS and Wi-Fi, and is compatible with both landline and mobile phones. It works in real-time and does not affect the phone's functioning.

The calls that you place through the software are free, using only the carrier's data package. It can therefore also be used for long-distance and international calls.

It works by generating a new encryption key automatically before every call. This single combination is modified every 4 seconds and prevents your communication from being intercepted.

Secure data is never saved on the device and the user isn't required to do anything. It uses less than 150 Mhz of processing power meaning it won't drain your battery too much.

In terms of industry the solution mainly targets consulting & engineering, healthcare & insurance, finance & legal, government & law enforcement and manufacturing & suppliers.
5. Orbot

The Tor project has made its name through the desktop browser, which uses a form of onion routing. This is more secure than simple encryption, as it first encrypts then bounces the traffic at random around the world through a volunteer network of routers.

Android users can install the Orbot package, an application designed to allow mobile users to access the web, instant messaging and email without any tracking or blocking.

It contains Tor and libevent, which provides a local HTTP proxy and the standard SOCKS4A/SOCKS5 proxy interfaces into the Tor network.

It can be installed from an F-Droid repository, the Android Market or manually from Guardian's website. All of the source code is available in the Orbotgit repository, but Tor notes that this might not always give you the latest stable Tor version.”

4.0 Significance and Impact of the Neo ISI Apps

1. Safe and Secure: The Apps are the only apps which provide cent percent end-to-end secure text data and information transmission as data or information is not transmitted or travel through transmission medium e.g. air, cables, wires etc. Apps can be designed especially for Secret agencies, Armed Forces top brass, Government top officials, President, Prime Ministers, Ministers, Editors, Journalists, Banking Systems.

2. Budget Controlling device: The only system which provides cent percent transmission side encryption (secure from hacking; saves encryption budget for the transmission side)

3. Fast and Fearless: The NET Apps system provides the secure and the fastest encrypted Text SMs transmission. They are designed to operate in the most constrained environment possible.

4. Two-in-One Service: The only system which provides the technology of transmission of text data and information simultaneously with voice message/conversation.

5. Free of Cost SMs: The only system which provides the facility to convert the Missed Calls into encrypted SMs.

6. The One and Only Apps: The Apps eliminate the threats of data and information vulnerability on transmission side by using data free signals technique.

7. Digital Activism: for innovative uses of technology to circumvent censorship and enable free and independent exchange of information.

8. Low cost & Austerity apps: Apps are low cost and revenue savers. To promote austerity on mobile phones.
9. Trust and secrecy: Apps are trustworthy and secret tools for all consumers particularly those individuals and organizations involved in confidential, competitive and sensitive activities.

10. Simplicity: Apps provide users to send their messages in short form, speedily and accurately with touch, amend and send service.

11. Helpful for Deaf, dumb and Trauma survivors: Apps provide fearless tools for deaf, dumb and Trauma survivors to connect the world securely.

12. E2E Security: Apps use an advanced end to end encryption protocol that provides privacy for every message every time.

5.0 The Set of Seven Softwares(S$^3$) (1, 2, 3, 5, 6, 7 & 8)

1. Missed Calls Text Messaging (Single sim or multiple sim; short duration voice free call [digital signal] only for one SMs) for transfer and receiving of Un-saved (not pre-existed SMs in software) information and data (text) by Miss Calls on mobile / landline phones.

2. Regular Signal Text Messaging (Single sim or multiple sims; one long duration voice free call [digital signal] for transfer and receiving of scores of SMs or saved or programmed information and data on mobile / wireless phones.

3. SP Missed Calls Text Messaging (Single sim or multiple sims; Using Service Provider (SP) missed call duration/analog signal for sending and receiving analog signal coded with SMs on mobile / landline phones.

4. Links Coding Service (using Regular Signal Text Messaging app for sending and receiving of links of audio, video, pictures and graphics) via mobile/ landline/ wireless phones.

5. Bell vibrations SMs (using SP Miss Calls duration/analog signal of bell to ring the bell of (mobile/landline) phone for sending and receiving SMs) on mobile / landline phone inbuilt bell.

6. Two-in-One/Talk-n-SMs (sending and receiving digital signals coded with SMs by using Human Voice / Beep Frequencies simultaneously with conversation on mobile screen) on mobile / landline/ wireless phones.

7. Motor Way App (MWA): Multiple Beep Sound App with single sim (sending and receiving scores of SMs by a single call / single digital signal by using different beep sound having different frequencies, pitch and loudness)

8. Beeper App (Multiple Beep sound with Multiple Sim):
   The App is designed for safe and secure Reporting on mobile phones for reporters/ editors/ Journalists etc.

6. The common digital signal Apps:
   These Apps transfer data simply by the common digital signals used in communications in mobile phones instead of encoded time intervals digital pulses.
a. **Rainbow App** (Pictures SMs encoded with multi-colors dots with single or multiple Sim mobile phone on Two dimensions plane[one face of a cube]):

b. **Rainbow Cube App** (Picture SMs encoded with multi-colors dots with single or multiple Sim mobile phone on Three Dimension plane[Cube]):

c. **Pixels AI Text Messaging Pictures App [PAITPA]**

Pixels Text Messaging Pictures App idea based on the technique used in composition of different colors by mixing Red, Green and Blue colors with different ratios. We send and receive pictures of different colors. The Digital Color Mixer Calculator installed in the App’s software which converts the colors into Hexadecimal numbers. Another software programmed with PIXASCII decodes that transforms the Hexadecimal numbers into English words/numbers/symbols/notations /punctuations words and simultaneously sentences.

d. **Pixels AI Text Messaging Video App [PAITVA] Two-in-One**

In PTMVA instead of picture we use video message / conversation to decrypt the PIXASCII codes into English words/numbers/symbols/notations /punctuations and simultaneously transforms into sentences. That is PTMVA provides Two-in-One service in one digital video pulse.

7.0 Using Time coding and decoding method (encryption and decryption method) we can transfer and receive text SMs or messages or text information and data by using Tele com systems:

1. Mobile Phone 2. Land Line Phone 3. Smart Phone 4. Wireless phone

7.1 Missed Calls Text Messaging App: Case 1

*(Single sim or multiple sim; short duration voice free call [digital signal] only for one of multiple SMs) for transfer and receiving of Un-saved( not pre-existed SMs in software) information and data (text) by Missed Calls on mobile / landline phones. In this case software can transfer and receive any text information and data not saved or existed in the software programmed with SP missed call duration of the area /city.)*

Pseudocode
Consider two persons A and B having the same software in their smartphones. The software is designed such that each alphabets (a to z) and notations, symbols etc is encoded with very small time interval. Suppose a = 0.6 s Capital A =0.94 s etc. If A wants to send SM = I m in post. Then a signal or pulse send to person B for SM = I m in post. The application just saves the total encoded time of signal/pulse of each letter which activates the ringing tone of the system.

The above stated SM pulse encoding will be consists of 8 letters suppose that I=0.5s, m=0.6 ,
in[ i=0.45s+n=0.32s / in=0.45+0.32=0.77s] and post[ p=0.11s , o=0.21s, s=0.33s, t=0.31s/ post coding time=0.96s] with their respective time code. Total time to send the SM =2.83s. Therefore, it requires to dial 8 times to send SM ‘I m in post’. To reduce the dialing time and increase the data sending speed we can use multiple sim phone. That is if both the users having 4 sims mobile phone then date sending speed would increase four times and the total time to send the SM will decrease to 0.7075s.

In this case each word or letter needs a separate time code, moreover, it needs more time to send it because to send each letter require to dial the person B phone number again and again till the last word to be dialed.

Data or Information in an analog form cannot be processed by digital system so it’s necessary to convert them into digital form. Pulse Code Modulation (PCM) is a method of converting an analog into digital signals. Therefore, a Modem is used to convert analog to digital signals or vice versa.

**Pulse for Case 1 (Missed Call /signal for each letter)**

Dialing = 4 times

Figure 1:

<table>
<thead>
<tr>
<th></th>
<th>2.5s</th>
<th>1.9s</th>
<th>2s</th>
<th>3.5s</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>I</td>
<td>m</td>
<td>in</td>
<td>post</td>
<td></td>
</tr>
</tbody>
</table>

**Pulse Code Modulation (PCM)**

Figure 2: Time code 2.5 s (X-axis)
For case 1, consider the signal (sine graph) having values on y-axis

0, 1,2,3,4,5,6,7,8,9,10,11,12,13,14 with respect to time on X-axis. Therefore, for SM ‘I’ having time code 2.5 s and half cycle is converted into digital signal (binary codes) as:
Here the sampling points would be0, 3, 6, 8, 10, 11, 12, 12, 12, 11, 10, 8, 6, 4, and 0 or in binary: 00000000 00000111 00000110 00001000 00001010 00001011 00001100 00001100 00001100 00001011 00001010 00001000 00000110 00000000

00001011 00001100 00001100 00001100 00001011 00001010 00001000 00000110 00000100 00000000 with respect to total time 2.5 s on X-axis. Similarly the next letter ‘m’ having time code 1.9 s can also be converted into digital signal with same binary codes but vary time code 1.9 s. In this case the half cycle will be contracted as:

Figure 3: Time code 1.9 s (X-axis)

Similarly, the graph of time codes for ‘in’ 2s and ‘post’ 3.5s will be expanded and contracted consecutively.

So by using this continue pulse [after converting SMs into binary system (0, 1) by PCM] the person B software decodes the message ‘I m in post’. This method can also be used for transferring and receiving SMs on wireless phone.

Dialing = 1 time

\[
\begin{array}{cccc}
2.5s & 1.9s & 2s & 3.5s \\
\hline
A & & & \\
\hline \\
I & m & in & \text{post} \\
\end{array}
\]

7.2 Case (2): For transfer and receiving of saved or programmed information and data by complete call(s) or sending of signals/EM waves by single or multiple sims.

Pseudocode
In this case users can transfer and receive text information and data which are already saved or programmed or existed in the system by using own telephone exchange instead of SP. Both person A and B have thousands of SAVED SMs in their software. For example person A wants to send 10 SMs i.e. I m in Karachi, When will u come?, Did u complete work?, I have no money, Do u like cash or cheque, Who is coming with u, I go to hotel, You send ur mails, I receive u, What do u expect me? with time codes 1.5 s ,1.8 s , 2.s, 2.5 s,2.9s , 2.75 s,3.8 s, 2.9 s and 4.5 s respectively. After selecting SMs series, the software “Pulse Breaker” breaks each SM after its code. Instead of Pulse Breaker we can use Beep Sound to show pause between two SMs.

The application saves the total time of receiving signal/pulse which activates the ringing tone of the system. That is a continue or unbroken pulse of 21.35 + sec can transfer the above stated 10 SMs to person B. Person A just select these messages from the saved SMs list and touch/press for send. A long duration pulse transfer SMs, information and data to person B where it will be decoded by software into continue SMs in just one call and very short interval of time as compared to Case (1) application.

This method can also be used on wireless phone with beep sound. Pulse for Case 2 (One Regular call/ signal for all SMs)

Figure 5:

```
<table>
<thead>
<tr>
<th>1.5s</th>
<th>1.8s</th>
<th>2s</th>
<th>2.5s</th>
<th>2.9s</th>
<th>2.75s</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8s</td>
<td>2.9s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

In this case a beep sound will separate each message (i.e. beep sound acts as divisor or indicator of SMs) in a single long duration call. For example after 1.5 s beep sound generate it repeats after each message pass word that is after 1.8s, 2s, 2.5s, 2.9s, 2.75s, 3.8s, 2.9s and 4.5s respectively.

For case 2, consider the signal (sine graph) having values on y-axis 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 with respect to time on X-axis.

Therefore, for SM ‘I m in Karachi’ having time code 1.5 sec and half cycle can be converted into digital signal (binary codes) as:

Here the sampling points would be 8,9,11,13,14,15,15,14,13,12,10,8 the value of Y-axis with respect to total time(1.5s) on X-axis.
The binary codes of sampling points: 00001000,00001001,00001111,00001111,00001111,00001111,00001111,00001111,00001111,00001111,00001111,00001110,00001111,00001111,00001101,00001100,00001010,00001000 with respect to time code 1.5 sec.

Similarly the next SM ‘When will u come?’ time code 1.8 s the sampling points would be: 7,5,3,2,1,0,0,1,2,4,6,7. In this case the X-axis will be expanded vis-à-vis first SM having time code 1.5s on X-axis.

Figure 6:

Sampling of a signal for 8-bit PCM

7.3 Beep Frequency SMs

**Pseudocode**

To increase the speed of sending SMs we use a beep sound having different frequencies. For example if want to send a SM = I am ok from person A to B. In this case coding will be for I = 80 Hz, am= 90 Hz and ok =100. If the duration of each beep is 0.1 s then the total time require to send SM = I am ok will be 0.3 s. Time duration of each beep can be decreased subjected to receiving side beep frequency detection results in software.

Therefore, by busing beep frequencies we can decrease the duration of sending and receiving SMs that is increasing the rate of sending SMs.

Figure 7:

0.1s ,80 Hz 0.1s , 90 Hz 0.1s, 100 Hz

A.___________.____________._____________. B

I am ok
7.4 Case (3): Using Miss Calls (analog signals/EM waves) duration as coding for transfer and receiving of text data and information.

Pseudocode

In this case person A uses Miss Calls duration time to send coded Text SMS to person B on Land Line, Mobile, Smart Phones. For example sender A wants to send SM ‘How r u?’ code= 3.5 sec then sender A after dialing drops the call after 3.5 sec i.e a Miss Call of 3.5 sec sends towards B. At B 3.5 +sec Miss Call is decoded as SM ‘How r u?’

7.5 Special Case: For sending and receiving of pictures, graphs, video and audio by sending link(s) or dialer website by the Regular Signal Text Messaging method.

Pseudocode

In this case person A sends a text SMs of link or website where pictures, graphics, video and audio are saved as mentioned in the coded SMs to person B. For example person A sends SM = ‘see Muhammad’s video clip on my link’ coding time= 5.8 +sec. Person B visit the link and see the video. Similarly, pictures, graphics and audio can also be seen and listen by person B.

8.0 Time Calculation for a complete Call:

Wireless Phone:

\[ \text{Total time lapse in distance b/w sender and receiver} + \text{total pulse coding time} \]

8.1 Smart, Mobile and Land Line phones:

\[ \text{Total dialing time} + \text{total time lapse in distance b/w sender and receiver} + \text{total pulse coding time} \]

Adjustment of Pulse time:

Case (a): When both receiver and sender are at ground level

By calculating the time lapse in distance between sender and receiver city to city, country to country we can adjust it in coding time of text SMs or data and information. For example time lapse in distance between Karachi and Islamabad is 0.2 s. If coding time of Text SM = 2.5 then total actual time of pulse at receiving end = 2.5 + 0.2 = 2.7 sec. Therefore, software adjusts the real coding time by using this formula Real coding Time = Total actual time of pulse at receiving end minus time lapse b/w Karachi and Islamabad. Similarly, the timeapse b/w country to country be adjusted by using the above stated Real Time Formula.

Case (b): When sender in rest position while receiver is moving in air or space or vice versa in this case by applying Time Dilation Formula (derived from the Einstein General Relativity Theory) can be used to adjust the coding time of Text SMS/data/information.
9.0 Bell Vibration/ frequency based Encryption:

**Pseudocode**

In Land Line phone a ringing bell is used to inform the person about incoming call. If voltage or supply frequency is 50 Hz or 50c/sec then bell rings 50 times in per second i.e. in one second bell sound generate 50 cycles, and in one minute bell generates 300 cycles. Now, we can use these cycles or vibrations of bell sound for coding the data or information.

For example I want to send SMs Where r u , code = 2.5 Hz or 2.5 cycle. Consider Person A sends the SMS to person B . In this case person A software drop the call after 2.5 cycles and at B the bell to ring after 2.5 c. B software will decrypt the SM as ‘Where r u ‘.

Similarly, by using Human sound vibrations/frequency method we can decrypt the caller/receiver voice vibrations or frequency as carrier to send text SMs, data or information on phones simultaneously. That is by activating this application we can use the voice to send text SMs simultaneously during conversation on phone(s).

For example person A talking to person B and says: ‘How r u . Did u complete ur work. I see u later. Good bye’. Now the software of A sends the secret SMs by coding the frequency of person A sound. For example the secrete SMs ‘Don’t leave the house today’ coding= 3 c; ‘I come tomorrow’ coding = 4.5 c; ‘I m coming Karachi’ coding= 5 c could be transferred to person B simultaneously over voice of person A.

**Telephonic speech frequency/vibration Encryption scale:**

**Pseudocode**

The voiced speech of a typical adult male will have a fundamental frequency from 85 to 180 Hz, and that of a typical adult female from 165 to 255 Hz. That is if a male talking on phone for one second his sound produces 85 to 180 cycles in the shape of wave(Fig A: Sine graph ; a cycle = (trough + crest) vis-à-vis female 165 to 255 cycles. For example if a sender wants to send a SM = ‘Where r u’ then there should be a software on both sending and receiving ends which converts the each word/ notation/ symbol/ punctuation of text SMs into cycle( c ) codes.

e.g 1c = a , 1.5 c = A, b = 2 c B = 2.5 c , c = 3c, C= 3.5 c, d=4c, D=4.5c, e =5c, E=5.5c, f=6c, F=6.5c, g=7c, G=7.5c, h=8c, H=8.5c, i=9c, I=9.5C, j=10c, J=10.5c, k=11c, K=11.5c, l=12c, L=12.5c, m=13c, M=13.5c, n=14c, N=14.5c, o= 15c, O=15.5c, p=16c, P=16.5c, q=17c, Q=17.5c, r=18c, R=18.5c,
s=19c, S=19.5c, t=20c, T=20.5c, u=21c, U=21.5c, v=22c, V=22.5c, w=23c, W=23.5c, y=24c, Y=24.5c, z=25c, Z=25.5c
Therefore, SM= ‘Where r u’, needs = W=23c, h=8c, e=5c, r=18c, e=5c, r=18c, u=21c i.e total 98cycles.

After 98 c software creates a pause in pulse by dropping the pulse current to zero( that is sine graph value will be 0 on X-axis) to show that the next SM is ahead. Let the 2nd text SM =100 c , 3rd one = 120 c, 4th one= 20 , 5th one=50c then five SMs need 388 c . In this method a ‘Digital Frequency Cycle Breaker’ or ‘Digital Frequency Cycle Counter’ is programmed in the software. This means that a male person having speech frequency 255Hz or cycles/second could transfers 5 SMs in 388 cycles which require just 1.52 sec.

Figure 8: (Sine graph)

10.0 Telephonic speech Time coding scale

Two-in-One/Talk-n-SMs( sending and receiving digital signals coded with SMs by using Human Voice / Beep Frequencies simultaneously with conversation on mobile screen) on mobile / landline/ wireless phones.

Pseudocode

Instead of coding vibration / cycle to send text SMs we can apply the time coding method as explained in 7.2 Case (2). In this method a ‘Digital Pulse Pace Breaker’[ i.e to minimize the pulse current to show a pause] can be programmed in the software or ‘Beep of same frequency with small and uniform duration’ could be installed in the software to produce pause by the producing variation of frequency of beep after each SM so that to separate each SM.

Suppose if person A conversation time is 10 seconds to person B then by using this method we can send the text SMs, data or information over voice (voice signals/EM waves/pulses) of the person B to 10 sec , simultaneously, through the single pulse or signal.

By using this application we can send and receive scores of SMs in single call over continue digital pulse / signal of voice /speech of speaker(s) without counting his/ her voice frequency cycles, simultaneously. Therefore, time coding of voice /speech on telephones method faster than vibration / cycle coding of voice / speech of persons.

Moreover, by the application of the above stated methods we can send and receive data and information by cycles coding (counting) and time coding of voice /audio method simultaneously to increase the speed of data and information sending.
11.0 Motorway App (MWA): Multiple Beep Sound App

In this App multiple beep sound of different frequencies are converted into encrypted messages to increase the rate of sending and receiving of text messaging by one call. This App acts like a motor way on which different lanes are available for different vehicles on the same motor way. The App can be run by single sim or multiple sims to increase the speed of data transfer.

Similarly, in Motor Way App(MWA) each beep sound assigned specific frequency, pitch and loudness to transfer scores of encrypted SMs in very short span of time. For example Rainbow of beeps namely Red Line, Orange Line, Yellow Line, Green Line, Blue Line, Indigo Line and Violet having frequency 80 Hz, 100Hz, 120Hz, 140Hz, 160Hz, 180Hz and 200Hz encrypted with different SMs are tandem with one digital signal by one call from the dialer of smart/wireless/landline phones can be decrypted on the receiving side by the App’s software.

12.0 Beeper App (Multiple Beep sound with Multiple Sim)

The App specially designs for Reporters, editors, writers and decision makers working in the print and electronic media industry to protect the freedom of expression. It is mirror image of the Motorway App. In Beeper App instead of a single sim we can use two, three or multiple sim mobile phone to increase the speed of data(encrypted data) transferring. For example, if we use three sim mobile phone then the speed of Beeper App data transfer will be increased three times as compare to the Motorway App having single sim.
13.0 NET Time Coding Standard (NETCS)

<table>
<thead>
<tr>
<th>S.No</th>
<th>Capital Letters</th>
<th>Time Coding s</th>
<th>Small Letters</th>
<th>Time Coding s</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>A</td>
<td>0.1</td>
<td>a</td>
<td>2.7</td>
</tr>
<tr>
<td>02</td>
<td>B</td>
<td>0.2</td>
<td>b</td>
<td>2.8</td>
</tr>
<tr>
<td>03</td>
<td>C</td>
<td>0.3</td>
<td>c</td>
<td>2.9</td>
</tr>
<tr>
<td>04</td>
<td>D</td>
<td>0.4</td>
<td>d</td>
<td>3.0</td>
</tr>
<tr>
<td>05</td>
<td>E</td>
<td>0.5</td>
<td>e</td>
<td>3.1</td>
</tr>
<tr>
<td>06</td>
<td>F</td>
<td>0.6</td>
<td>f</td>
<td>3.2</td>
</tr>
<tr>
<td>07</td>
<td>G</td>
<td>0.7</td>
<td>g</td>
<td>3.3</td>
</tr>
<tr>
<td>08</td>
<td>H</td>
<td>0.8</td>
<td>h</td>
<td>3.4</td>
</tr>
<tr>
<td>09</td>
<td>I</td>
<td>0.9</td>
<td>i</td>
<td>3.5</td>
</tr>
<tr>
<td>10</td>
<td>J</td>
<td>1</td>
<td>j</td>
<td>3.6</td>
</tr>
<tr>
<td>11</td>
<td>K</td>
<td>1.1</td>
<td>k</td>
<td>3.7</td>
</tr>
<tr>
<td>12</td>
<td>L</td>
<td>1.2</td>
<td>l</td>
<td>3.8</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>1.3</td>
<td>m</td>
<td>3.9</td>
</tr>
<tr>
<td>14</td>
<td>N</td>
<td>1.4</td>
<td>n</td>
<td>4.0</td>
</tr>
<tr>
<td>15</td>
<td>O</td>
<td>1.5</td>
<td>o</td>
<td>4.1</td>
</tr>
<tr>
<td>16</td>
<td>P</td>
<td>1.6</td>
<td>p</td>
<td>4.2</td>
</tr>
<tr>
<td>17</td>
<td>Q</td>
<td>1.7</td>
<td>q</td>
<td>4.3</td>
</tr>
<tr>
<td>18</td>
<td>R</td>
<td>1.8</td>
<td>r</td>
<td>4.4</td>
</tr>
<tr>
<td>19</td>
<td>S</td>
<td>1.9</td>
<td>s</td>
<td>4.5</td>
</tr>
<tr>
<td>20</td>
<td>T</td>
<td>2.0</td>
<td>t</td>
<td>4.6</td>
</tr>
<tr>
<td>21</td>
<td>U</td>
<td>2.1</td>
<td>u</td>
<td>4.7</td>
</tr>
<tr>
<td>22</td>
<td>V</td>
<td>2.2</td>
<td>v</td>
<td>4.8</td>
</tr>
<tr>
<td>23</td>
<td>W</td>
<td>2.3</td>
<td>w</td>
<td>4.9</td>
</tr>
<tr>
<td>24</td>
<td>X</td>
<td>2.4</td>
<td>x</td>
<td>5.0</td>
</tr>
<tr>
<td>25</td>
<td>Y</td>
<td>2.5</td>
<td>y</td>
<td>5.1</td>
</tr>
<tr>
<td>26</td>
<td>Z</td>
<td>2.6</td>
<td>z</td>
<td>5.2</td>
</tr>
</tbody>
</table>
### Table 2

<table>
<thead>
<tr>
<th>S.No</th>
<th>Numbers / Time code</th>
<th>Punctuations/Time code</th>
<th>Symbols/ Notations/Time code</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>0 = 5.3s</td>
<td>. = 6.3s</td>
<td>@ = 7.7s</td>
</tr>
<tr>
<td>02</td>
<td>1 = 5.4s</td>
<td>, = 6.4s</td>
<td># = 7.8s</td>
</tr>
<tr>
<td>03</td>
<td>2 = 5.5s</td>
<td>; = 6.5s</td>
<td>% = 7.9s</td>
</tr>
<tr>
<td>04</td>
<td>3 = 5.6s</td>
<td>‘ = 6.6s</td>
<td>$ = 8.0s</td>
</tr>
<tr>
<td>05</td>
<td>4 = 5.7s</td>
<td>‘= 6.6s</td>
<td>^ = 8.1s</td>
</tr>
<tr>
<td>06</td>
<td>5 = 5.8s</td>
<td>“= 6.7s</td>
<td>&amp; = 8.2s</td>
</tr>
<tr>
<td>07</td>
<td>6 = 5.9s</td>
<td>?= 6.8s</td>
<td>* = 8.3s</td>
</tr>
<tr>
<td>08</td>
<td>7 = 6.0s</td>
<td>/= 6.9s</td>
<td>&gt; = 8.4s</td>
</tr>
<tr>
<td>09</td>
<td>8 = 6.1s</td>
<td>+= 7.0</td>
<td>&lt; = 8.5s</td>
</tr>
<tr>
<td>10</td>
<td>9 = 6.2s</td>
<td>- = 7.1s</td>
<td>} = 8.6s</td>
</tr>
<tr>
<td>11</td>
<td>_ = 7.2ss</td>
<td>{ = 8.7s</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>!= 7.3s</td>
<td>{ = 8.8s</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>( = 7.4s</td>
<td>} = 8.9s</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>) = 7.5s</td>
<td>\ = 9.0s</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>, = 7.6s</td>
<td></td>
<td>= 9.1s</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Rs = 9.2 s</td>
<td></td>
</tr>
</tbody>
</table>
15.0 Pseudocode of Motorway App:

In this case by using NET Apps design for banking transaction shows the transfer of amount from one to another account.

<table>
<thead>
<tr>
<th>Head</th>
<th>Time Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount transfer to A/C # 20311</td>
<td>27.75</td>
</tr>
<tr>
<td>Bank Name</td>
<td>HBL</td>
</tr>
<tr>
<td>Branch Code</td>
<td># 714</td>
</tr>
<tr>
<td>Amount to be transferred Rs 500</td>
<td></td>
</tr>
<tr>
<td>Sender A/C</td>
<td></td>
</tr>
<tr>
<td>Bank Name</td>
<td>ABL</td>
</tr>
<tr>
<td>Sender P.W</td>
<td>892ABL</td>
</tr>
<tr>
<td>Per Beep Ringing Pause(PBRP)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>S.No</th>
<th>Line Color</th>
<th>Beep Frequency (Hz)</th>
<th>Data /Short Message SMs</th>
<th>Beep Time Coding interval (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Red</td>
<td>80</td>
<td>Amount transfer to A/c # 20311</td>
<td>27.75</td>
</tr>
<tr>
<td>02</td>
<td>Orange</td>
<td>100</td>
<td>Bank Name HBL</td>
<td>2.53</td>
</tr>
<tr>
<td>03</td>
<td>Yellow</td>
<td>120</td>
<td>Branch code # 714</td>
<td>17.43</td>
</tr>
<tr>
<td>04</td>
<td>Green</td>
<td>140</td>
<td>Amount to be transferred Rs 500</td>
<td>25.93</td>
</tr>
<tr>
<td>05</td>
<td>Blue</td>
<td>160</td>
<td>Sender A/c 678976</td>
<td>36.76</td>
</tr>
<tr>
<td>06</td>
<td>Indigo</td>
<td>180</td>
<td>Bank name ABL</td>
<td>1.83</td>
</tr>
<tr>
<td>07</td>
<td>Violet</td>
<td>200</td>
<td>Sender P.W 892ABL</td>
<td>18.46</td>
</tr>
<tr>
<td>Total Time</td>
<td></td>
<td></td>
<td></td>
<td>130.69</td>
</tr>
</tbody>
</table>
Red Line generates beep for Amount transfer to A/C # 20311 = 5.5 s beep+ pause 0.11+
5.3 beep + pause 0.11+ 5.6 s beep+ pause 0.11 s +5.4 s beep + 0.11 + 5.4 s beep +
0.11 = 27.75 s

Similarly Orange, Yellow, Green, Blue, Indigo and Violet Lines transfer the data.

Firstly, we start generating Blue Line beep because it has the maximum value of time coding. Then simultaneously Red, Orange, Yellow, Green, Indigo and Violet Lines beeps are generated.

16.0 Model Class/Line

The Model Class is defined as the class/line contains maximum time to send its data and that time will be the total time requires for sending all data. Here, Blue line is the Model Class. Therefore, the total time required to send the whole information about the amount transaction is 36.76 s

By using the NET Time Coding Standard (NETTCS) we can send and receive scores of SMS. For example a SM ‘I am at home’ needs l= 0.9 s, space bar= 0.190 s[ 3 x0.190= 0.57s] , a=0.1s, m=3.9s , a=0.1 s, t=4.6s, h=3.4s, o=4.1s, m=3.9s, e = 3.1 s , hence, total time for this SM is 24.57 s.

17.0 Beep Ringing Pause(BRP)

Pseudocode

If we use only Red Line to send this SM 24.57 s beep will produce very small pauses of 0.190s (space bar) after [I], [am] and [at]. Moreover, negligible 0.110 s beep ringing pause after each letters of the SM. Here total number of letters are 9 therefore 9 x 0.110 s = 0.99 s. Therefore, the total time to send the SM is 24.57 + 0.99 = 25.56 s

Indigo Line produces space bar = 0.190s , Violet Line produces h = 3.4 s beep, and in second phase again Red Line produces o=4.1 s beep, Orange Line produces m=3.9s beep, Yellow Line produces e=3.1 s beep. Hence the total time require to send the SM “I am at home” by this Multiple Beep System is the longest time(Model Class) interval produced by Violet Line beep in first phase that is 4.6s.

18. Rainbow App (Picture SMs encoded with multi-colors dots with multiple Sim mobile phone on Two Dimensions Plane):

The SMs app idea based on encoded dots of different colors to be converted into digital picture signal for smart phone/wireless phone.

In Rainbow App we make a separate table for English alphabets, symbols, 0 to 9 digits and notations encoded by dots of different colors. We use digital picture pulses to send and receive
the color dots encrypted SMs. Suppose we take blue dot for A and red dot for a\[A_{,\text{BR}} \], , green dot for B, black dot for b\[B_{,\text{GBI}} \], yellow dot C, indigo dot for c\[C_{,\text{YI}} \], orange dot D, violet dot for d\[D_{,\text{OV}} \], pink dot for E, a cherry red dot for e \[P_{,\text{Ee}} \]. Moreover, two blue dots for F, one blue-one red for f\[2\text{B,} \text{BR-Ff}\], two green dots for G, one green-one black for g, two yellow dots for H, one yellow-one indigo for h, two orange for I, one orange-one violet dots for i, two pink dots for J, one pink-one violet for j. Similarly, Three blue dots for K, 2 red -1 bule dots for k, three green dots for L, two pink dots for l, 2green-1black dots for l, three yellow dots M, 2 yellow-1indigo dots for m, three orange dots for N, 2orange-1violet dots for n, four blue dots for O, two Red dots for o etc. We assigned colorless dot for space between two letters or words\[ \]. Suppose a user of this App want to send transfer the SM = ‘A golden book ‘ to the other one then according to this App:

Encoded SM = [B][][2R2 ][2G-BI ][V][Cr][2O-V][][BI ] [2R2 ] [2R2 ][2R-B]

19.0 Rainbow Cube App ( Picture SMs encoded with multi-colors dots with single or multiple Sim mobile phone on Three Dimensions Plane[Cube]):

This App is the advance version of Rainbow App as it transfers and receives encoded dots of colors in three dimensions in the form of Data Cubes. As the data transmission extends to three dimension (x,y,z), obviously, the App performance or efficiency increases SIX times as compared to the Rainbow App which carries data in two dimension plane that is equal to one face of a cube. We use the pictures of same encoded dots of colors as in the case of Rainbow App to transfer data.

A. Pixels AI Text Messaging Pictures App [PAITPA]

Pixels Text Messaging Pictures App idea based on the technique used in composition of different colors by mixing Red, Green and Blue colors with different ratios. We send and receive pictures of different colors. The Digital Color Mixer Calculator installed in the App’s software which converts the colors into Hexadecimal numbers. Another software programmed with PIXASCII decodes that transforms the Hexadecimal numbers into English words/numbers/symbols/notations/punctuations words and simultaneously sentences.


In PTMVA instead of picture we use video message / conversation to decrypt the PIXASCII codes into English words/numbers/symbols/notations/punctuations words simultaneously transforms into sentences. That is PTMVA provides Two-in-One service in one digital video pulse.
Definition of Pixel:

Pixel is the combination of two words picture (Pix) and Element (el) therefore combining Pix and el we get Pixel. The fundamental display element of an electronic screen or bitmapped image. Screen resolution is rated by the number of horizontal and vertical pixels; for example, 1024x768 means 1,024 pixels are displayed in each row, and there are 768 rows (lines). Likewise, bitmapped images are sized in pixels: a 350x250 image has 350 pixels across and 250 down.

Pixel (X) to Centimeter Conversion Table

<table>
<thead>
<tr>
<th>Pixel</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.2645 Cms</td>
</tr>
<tr>
<td>20</td>
<td>0.5291 Cms</td>
</tr>
<tr>
<td>50</td>
<td>1.3229 Cms</td>
</tr>
<tr>
<td>100</td>
<td>2.6458 Cms</td>
</tr>
<tr>
<td>1000</td>
<td>26.4583 Cms</td>
</tr>
</tbody>
</table>

Table 1

Colors on A Computer Screen

Color from a computer monitor or a TV screen results from a different process than that due to reflection or transmission by a solid or solution. A monitor or TV screen generates three colors of light (red, green, and blue) and the different colors we see are due to different combinations and intensities of these three primary colors.

Each pixel on a computer screen is composed of three small dots of compounds called phosphors surrounded by a black mask. The phosphors emit light when struck by the electron beams produced by the electron guns at the rear of the tube. The three separate phosphors produce red, green, and blue light, respectively.
A sketch of a pixel showing the red, green and blue color produced by the three phosphors.

Black, White, and Gray: Nothing, All, or Some

When no electrons strike the phosphors of a computer screen the phosphors emit no light and the screen appears black. On a white section of a screen all three phosphors are excited and produce light with about the same relative intensities as in sunlight so the light appears white. Gray parts of the screen have all three phosphors producing light, but at a much lower intensity. A sample color block and a sketch of a pixel from the block is shown below for each of these three colors.

The colors black, white, and gray with a sketch of a pixel from each.

Red, Green and Blue: Pure Colors

Red, green, and blue colors are produced by exciting the respective phosphor.

The colors red, green, and blue with a sketch of a pixel from each.

Cyan, Purple, and Yellow: Combinations of Two Colors
Cyan, purple, and yellow are mixtures of two of the primary colors with equal intensities of each.

Mixtures of Three Colors

Mixtures of two or three primary colors with different intensities give the other colors. The combinations for orange (red with a little green), neon pink (red with a little green and a little blue), and turquoise (blue and green with a little red) are shown below.

Pixels and Subpixels

In monochrome systems, the pixel is the smallest addressable unit. With color systems, each pixel contains red, green and blue subpixels, and the subpixel is the smallest addressable unit for the screen's electronic circuits. The software addresses the pixel, and the hardware addresses the subpixels that make up the pixel. For more on the red, green, blue concept, .

Pixel Structures

In storage, pixels are made up of one or more bits. The greater this "color depth" or "bit depth," the more shades or colors can be represented. The most economical system is monochrome, which uses one bit per pixel (on/off). Gray scale and color typically use from four to 24 bits per pixel, providing from 16 to 16 million colors .
Hexadecimal and character sets

Text and numbers can be encoded in a computer as patterns of binary digits. Hexadecimal is a shortcut for representing binary. ASCII and Unicode are important character sets that are used as standard.

Using Hexadecimal

Hex codes are used in many areas of computing to simplify binary codes. It is important to note that computers do not use hexadecimal - it is used by humans to shorten binary to a more easily understandable form. Hexadecimal is translated into binary for computer use. Some examples of where Hex is used include:

Colors

Hex can be used to represent colors on web pages and image-editing programs using the format #RRGGBB (RR = reds, GG = greens, BB = blues). The # symbol indicates that the number has been written in hex format.

This system uses two Hex digits for each color, e.g. Orange color #FF6600. As one hex digit represents 4 bits, two hex digits together make 8 bits (1 byte). The values for each color run between 00 and FF. In binary, 00 is 0000 0000 and FF is 1111 1111. That provides 256 possible values for each of the three colors.

That gives a total spectrum of 256 reds x 256 greens x 256 blues - which is over 16 million colors in total.

#FF0000 will be the purest red - red only, no green or blue.

Black is #000000 - no red, no green and no blue.

White is #FFFFFF.

An orange color can be represented by the code #FF6600. The hex code is much easier to read than the binary equivalent 1111 1111 0110 0110 0000 0000.

If you are making a web page with HTML or CSS you can use hex codes to choose the colours.

RGB color model

Hex values have equivalents in the RGB colour model. The RGB model is very similar to the hex color model, but instead of combining hex values you use a value between 0 and 255 for each color. So an orange color that is #FF6600 in hex would be 255, 102, 0 in RGB.

What does image resolution mean?
Resolution refers to the number of pixels in an image. Resolution is sometimes identified by the width and height of the image as well as the total number of pixels in the image. For example, an image that is 2048 pixels wide and 1536 pixels high (2048 x 1536) contains (multiply) 3,145,728 pixels (or 3.1 Megapixels). You could call it a 2048 x 1536 or a 3.1 Megapixel image. As the megapixels in the pickup device in your camera increase so does the possible maximum size image you can produce. This means that a 5 megapixel camera is capable of capturing a larger image than a 3 megapixel camera.

Hexadecimals

Hexadecimal numbers are "natural" to computers, because computers store and handle binary digits, and four binary digits make one hexadecimal digit.
<table>
<thead>
<tr>
<th>Decimal</th>
<th>Binary</th>
<th>Hexadecimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>101</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>110</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>111</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>1000</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>1001</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>1010</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>1011</td>
<td>B</td>
</tr>
<tr>
<td>12</td>
<td>1100</td>
<td>C</td>
</tr>
<tr>
<td>13</td>
<td>1101</td>
<td>D</td>
</tr>
<tr>
<td>14</td>
<td>1110</td>
<td>E</td>
</tr>
<tr>
<td>15</td>
<td>1111</td>
<td>F</td>
</tr>
</tbody>
</table>

**Hexadecimals** Table 2
16 Million Colors

Because each of the three colors can have values from 0 to 255 (256 possible values), there are:

\[256 \times 256 \times 256 = 16,777,216\]

(and this is why you see claims of "16 Million Colors" on computer equipment)

Web Format

The format ("notation") used on web pages is #RRGGBB, where RR is how much Red (using two hexadecimal digits), GG is how much Green, and BB how much Blue.

Example: a nice shade of blue is made up of:

64/255 Red,

48/255 Green

255/255 (i.e. full) Blue

So it is (64,48,255) in decimal, which is equal to (40,30,FF) in hexadecimal and is coded as #4030FF.

This may help you remember:

Roses are #FF0000
Violets are #0000FF
Just don't forget,
Grass is #00FF00, too
<table>
<thead>
<tr>
<th>Color</th>
<th>Decimal (Red, Green, Blue)</th>
<th>Hexadecimal (#RRGGBB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>(0, 0, 0)</td>
<td>#000000</td>
</tr>
<tr>
<td>White</td>
<td>(255, 255, 255)</td>
<td>#FFFFFF</td>
</tr>
<tr>
<td>Red</td>
<td>(255, 0, 0)</td>
<td>#FF0000</td>
</tr>
<tr>
<td>Green</td>
<td>(0, 255, 0)</td>
<td>#00FF00</td>
</tr>
<tr>
<td>Blue</td>
<td>(0, 0, 255)</td>
<td>#0000FF</td>
</tr>
<tr>
<td>Yellow</td>
<td>(255, 255, 0)</td>
<td>#FFFF00</td>
</tr>
<tr>
<td>Cyan</td>
<td>(0, 255, 255)</td>
<td>#00FFFF</td>
</tr>
<tr>
<td>Magenta</td>
<td>(255, 0, 255)</td>
<td>#FF00FF</td>
</tr>
</tbody>
</table>

Common Colors Table 3
## Pixels App Standard Code for Information Interchange (PIXASCII)

<table>
<thead>
<tr>
<th>S.No</th>
<th>Capital Letters</th>
<th>Decimal # Color</th>
<th>Notations /Symbols</th>
<th>Punctuations</th>
<th>Small Letter</th>
<th>Decimal# color</th>
<th>Numbers</th>
<th>Hexadecimal #</th>
<th>R, G, B Decimal # Color Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>A</td>
<td>10 R</td>
<td>= 65 R,G,B</td>
<td>. 45R,G,B</td>
<td>a</td>
<td>10 G</td>
<td>0</td>
<td>00</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>02</td>
<td>B</td>
<td>20 B</td>
<td>+ 65 R,G,B</td>
<td>, 45R,G,B</td>
<td>b</td>
<td>20 R</td>
<td>1</td>
<td>01</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>04</td>
<td>D</td>
<td>40 R</td>
<td></td>
<td>65 R,G,B</td>
<td>d</td>
<td>40 G</td>
<td>3</td>
<td>03</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>05</td>
<td>E</td>
<td>50 B</td>
<td>&gt; 65 R,G,B</td>
<td>&quot; 45R,G,B</td>
<td>e</td>
<td>50 R</td>
<td>4</td>
<td>04</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>06</td>
<td>F</td>
<td>60 G</td>
<td>&lt; 65 R,G,B</td>
<td>: 45R,G,B</td>
<td>f</td>
<td>60 B</td>
<td>5</td>
<td>05</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>07</td>
<td>G</td>
<td>70 R</td>
<td>* 65 R,G,B</td>
<td>! 45R,G,B</td>
<td>g</td>
<td>70 G</td>
<td>6</td>
<td>06</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>10</td>
<td>J</td>
<td>100 R</td>
<td>% 65 R,G,B</td>
<td>- 45R,G,B</td>
<td>j</td>
<td>100 G</td>
<td>9</td>
<td>09</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>12</td>
<td>L</td>
<td>120 G</td>
<td># 65 R,G,B</td>
<td>) 45R,G,B</td>
<td>l</td>
<td>120 B</td>
<td>11</td>
<td>0B</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>130 R</td>
<td>@ 65 R,G,B</td>
<td>( 45 R,G,B</td>
<td>m</td>
<td>130 G</td>
<td>12</td>
<td>0C</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>14</td>
<td>N</td>
<td>140 B</td>
<td>~ 65 R,G,B</td>
<td>; 45 R,G,B</td>
<td>n</td>
<td>140 R</td>
<td>13</td>
<td>0D</td>
<td>255,255, 255</td>
</tr>
<tr>
<td>15</td>
<td>O</td>
<td>150 G</td>
<td>` 65 R,G,B</td>
<td>o</td>
<td>150 B</td>
<td>14</td>
<td>0E</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>P</td>
<td>160 R</td>
<td>160 G</td>
<td>p</td>
<td>160 G</td>
<td>15</td>
<td>0F</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Q</td>
<td>170 B</td>
<td>q</td>
<td>q</td>
<td>170 R</td>
<td>16</td>
<td>10</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>R</td>
<td>180 G</td>
<td>r</td>
<td>r</td>
<td>180 B</td>
<td>17</td>
<td>11</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>S</td>
<td>190 R</td>
<td>s</td>
<td>s</td>
<td>190 G</td>
<td>18</td>
<td>12</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>T</td>
<td>200 B</td>
<td>t</td>
<td>t</td>
<td>200 R</td>
<td>19</td>
<td>13</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>U</td>
<td>210 G</td>
<td>u</td>
<td>u</td>
<td>210 B</td>
<td>20</td>
<td>14</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>V</td>
<td>220 R</td>
<td>v</td>
<td>v</td>
<td>220 G</td>
<td>21</td>
<td>15</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>W</td>
<td>230 B</td>
<td>w</td>
<td>w</td>
<td>230 R</td>
<td>22</td>
<td>16</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>X</td>
<td>240 G</td>
<td>x</td>
<td>x</td>
<td>240 B</td>
<td>23</td>
<td>17</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Y</td>
<td>250 R</td>
<td>Y</td>
<td>Y</td>
<td>250 G</td>
<td>24</td>
<td>18</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Z</td>
<td>255 B</td>
<td>z</td>
<td>z</td>
<td>255 R</td>
<td>25</td>
<td>19</td>
<td>255,255, 255</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Space Bar</td>
<td>55 R, B, G</td>
<td>Space Bar</td>
<td>55 R, B, G</td>
<td>26</td>
<td>1A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PIXASCII Table 4**
Case I: PIXASCII  Space Bar / Notations/ Symbols/Punctuations

1. Space bar color is not fixed because it, automatically that is by using Artificial Intelligence (AI) Logic, adopts its suitable color to complete its pixel having R, G, B composition by analyzing the preceding letters /symbols/ notations colors. For example if two letter/symbol/notation having R, B color then Space bar will adopt G to complete the composition R, G, B. if predecessor letter contain R, G then space bar will be B and so on.

2. Each punctuations and symbols/notations assign decimal codes 45 and 65 respectively. Each can adopt its color by using Artificial Intelligence (AI) Logic to complete its composition of R, G,B color as per the preceding letters /symbols/ notations colors. For example if the predecessors color are R, B then symbol/notation/punctuation will adopt G color to complete the R, G, B composition.

Case II: PIXASCII Repetition of same Capital / small letters/notations/symbols/Punctuations

1. AAA = 10 R+10 R+ 10 R
   In this case each 10 R complete its color scheme by using AI such that
   10 R+ OG+OB = 1 Pixel
   Hence remaining 10 R will also adopt the same method to complete their color scheme. Therefore total three pixels will be used to write AAA.

Pseudocoding

In both Pixels Text Messaging Pictures App [PTMPA] and Pixels Text Messaging Video App [PTMVA] a Digital Color Mixer is installed in the Apps software for encoding and decoding of different ratios of R, G, B to make different color scheme. Color Mixer not only shows the different colors by mixing different ratios of R,G,B colors but also acts as calculator to convert the decimal codes of R,G,B colors into Hexadecimal numbers.

Color Line Method

During video message the Upper or lower part of mobile screen shows the flow of different colors continuously which are produced by Digital Color Mixer. The Colors Mixer Calculator programmed in the software of the App converts these colors into Hexadecimal numbers.
Another software programmed with PIXASCII codes reads the Hexadecimal numbers of each pixel and decodes the Hexadecimal numbers into English words/numbers/symbols/notations/punctuations and transforms into sentences.

**Hexadecimal Numbers Method**

In this method we show different colors ratios of R,G,B [encoded Hexadecimal numbers text messages in PIXASCII] during video messaging / conversation, simultaneously, in Hexadecimal numbers continuously on the upper or lower part of screen of mobile. Hexadecimal number of each pixel also runs rapidly with color line on the screen. Another software of the App decrypts these Hexadecimal numbers into text/SMs by using PIXASCII codes or to transform it into English words/numbers/symbols/notations/punctuations and transforms into sentences.

For example:

By using PIXASCII codes we can encode the Short Message

I AM OK = 90 G+ 55 B +10 R + 130 R+ 55 B+150 G + 110 B + 0 R + 0 B

I +Space bar A = Hexadecimal # = 0A5A37 = 1 Pix

M Space bar O = Hexadecimal # = 829637 = 1 Pix

K = Hexadecimal # = 00006E= 1 Pix

**Salient Features**

1. The most advanced AI fastest E2E encrypted text App
2. No hacker and intruder can decode the encrypted Hexadecimal codes even to be hacked or intercepted by them.
3. The best encrypted App for journalists, reporters, editors being watched by opponents or competitors, and decision makers of business, defence and banking organizations.

**20.0 Conclusion**

The Neo ISI E2E encrypted Apps ideas based on the Natural Encryption Technology (NET) which creates Information Black Holes (IBHs) in the form of time interval encrypted data during transmission through digital pulses in space-time that mode protects the text data and information perfectly. It provides perfectly secure services by isolating transmission side from any hackers or intruders. Moreover, Rainbow E2E encrypted Apps and Pixels E2E encrypted Apps can easily send and receive text data and information by using digital technology.
References:

2. http://androidandme.com/2015/06/sponsored/review-vipole-secure-messenger/
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17. Siddiqui, M.N.(Updated the research Published in the Daily Jang mid-week magazine Karachi on June 19, 1996)