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The IPtX Domain Name Service Specification; IPtX-MX DNS

'draft-terrell-iptx-mx-dns-specification-01'

Status of this Memo

Intellectual Property Rights (IPR) Statement

Requirements Terminology

The keywords Must, Must Not, Required, Shall, Shall Not, Should, Should Not, Recommended, May, and Optional, when they appear in this document, are to be interpreted as described in [RFC-2119].

Conventions

Please note, the mathematical operators that cannot be represented in the 'txt' file format, which represent; the '^' Carrot sign for 'NESTED' Super-Script, and the 'v' sign is used for a 'NESTED' Sub-Script.

This Internet-Draft will expire on January 27th, 2008.

Abstract

This document defines the IPtX Specification for the 'Domain Name Service' (IPtX / IPtX-MX DNS), and eliminates the possibility of an Addressing 'Conflict', or a Mathematical Addressing Error in the IPtX Address Space when using Multiple IPtX Addressing Formats. In other words, the IPtX / IPtX-MX IP Addressing format on the "Back-End", or "Backbone", obtains its uniqueness through the use and / or difference defined by the accuracy of the 'Exponential Decimal String'. However, this uniqueness, if not clarified, would not be discernable on the "Front-End", because the IPtX IP Addressing Specification 'Allows' only a '64' Bit-Mapped IP Address, or 2 Octets and 4 Quadrants for every IP Addressing Format. That is, on the "Front-End", if there is No distinction, because every Addressing Format in the IPtX Specification, when Resolved, is Equal, there will ultimately be Address Conflicts within the Addressing Scheme.

Introduction

The profoundness of the 'IPtX Specification' is that, it represents and defines a real conundrum. In other words, IP Addressing in the IPtX Specification, is a Mathematical Enigma that begs the question; 'How much does anyone really know about the Human Neuronic Processes? Or more specifically; 'Does anyone truly understand the Communication Process of the Neuron (perhaps, Macro and Quantum Levels), to actually develop a 'True Artificial Intelligence'? In which case, it should be understood; Today's Computers cannot discern the 'Identity', or 'Equality', between any two or more IP Addresses having Numerical Value(s) that actually define the same IP Address in the IPtX Specification - e.g.;

```
     213 = 00E0000.0000... ~ 2          E    7  .         73
  11010101                   11   11001010  111  .    1001001

         Bit-Mapped Length  =  110101011111001001  ~  18 Bits


     213 = 00E0000.0000... ~ 2          E    7  .         735
  11010101                   11   11001010  111  .  1011011111

       Bit-Mapped Length  =  110101011111011011111  ~  21 Bits
```

The distinction between the Binary Numerals is defined by the Accuracy of the 'Exponential Decimal String', which represents a Unique Binary Sequence from the Binary Set, {0,1}. However, while this clearly defines a valid conclusion, it is sustained only on the "Back-End". In other words, when converting the Binary Sequence into the Integer representing the IP Address, an additional Tag, which identifies (equaling the 'CIDR Network Descriptor') the Bit-Mapped Length of the Addressing Format being used is necessary when making a distinction - where;

```
11111111 : 11 11111111 'Variable Bit Length' . 'Variable Bit Length'

=     0000 :  2        E                  0000 . 0000...

    2E0000 . 0000...   =   XXX:XXX:XXX.XXX.XXX.XXX  ±/0000:00

                       = IPtX IP Address
```

And given that the Display of the 'CIDR Network Descriptor' is replaced with the Display of the Name of the Addressing Format identifying the Bit-Mapped Length of the IPtX Addressing Format being used;

```
±/0000:00  =  IPtX  =  {IPt1, IPt2, ... IPt100, ... IPtX}
```

The User sees the Binary Conversion of '2E0000 . 0000...' only as the Integer which represents the IPtX IP Address - In other words, using the IPtX / IPtX-MX DNS 'IP Addressing Format Tag', which distinguishes the Addressing Specification using an 'A' to represent the number of 32 Bit Groupings the Addressing Format contains, prevents 'Front-End' Address Resolution Conflicts. - As given by;

'Front-End' Address Resolution - Conflict Avoidance Technique

' XXX:XXX:XXX.XXX.XXX.XXX /XA '

-- Or --

' XXX:XXX:XXX.XXX.XXX.XXX /IPtX '

/IPtX = {IPt1, IPt2, ... , IPt10,000, ... , IPtX} = /XA

213:112:238.009.212.001 /XA , Or, 213:112:238.009.212.001 /IPtX

Where; 'X' = {Any Integer}, and 'A' = {One '4' Octet Group}
and the 'Preferred', since ; XA = 16 Bits:

/XA = 16 Bits = 2EX ; An 'IPtX / IPtX-MX DNS Tag'

2EX; 3Bit = Exponent = 2^3, 3 Bit Decimal String = 2^3

2EX = 2E8 .8 = The Number of ('A') Octet Groupings

(Yielding a 8 Bit Number with a 8 Bit Decimal String Accuracy)

Or - [/X ≥ 1, X ≤ 2^{24}; and A = Class ID - 'ID' = A, B, C, D, or E] = /XA

' 213 : 112 : 238 . 009 . 212 . 001 ±/XA '

2^{24} = Unused Bits
= Internet Service Provider 'ID'
(Back-End ISP ID)

3 State CIDR Network Descriptor
8 - 16 Bit - Switch {'Ø','+','-', '/'}
[Where 'Ø' means "No Sign" or '/']

THE END-NODE OR FRONT-END
Network IP Address
39 Bits Or
4-8 Bit Octets

8 - 16 Bits

/XA = / 2^{24} : Class ID

8 Bit
ZONE IP ADDRESS

8 - 16 Bits

'2EX' = [XXX : XXX : 999 . 999 . 999 . 999 '±' / X A] ~ 104 Bits

8 Bit - IP AREA CODE ADDRESS

16 thru 48 Bits - 'IPtX / IPtX-MX DNS Tag'

Note: If - (Prefix x Zone IP x IP Area Code) = 2^{24};
(Network IP Address) ~ 2^{40}; (IPtX-MX DNS Tag) = 2^{48};

And - 104 Bit-Mapped Length = (2^{16}) x (2^{40}) x (2^{48})

Then - (2^{24}) x (2^{40}) x (2^{48}) = 0000:2E0000.0000... = IPt1
= [2^{24} = Unused Bits] x (2^{24}) x (2^{40}) x (2^{48}) = 2^{136}

'IPtX / IPtX-MX IP Addressing DNS Tag'

Given that; if the DNS Tag, in essence, represents a Function 'Call' that determines the IPtX Addressing Format being used, then it (the DNS Tag) must also determine the accuracy of the Exponential Decimal String - as given by;

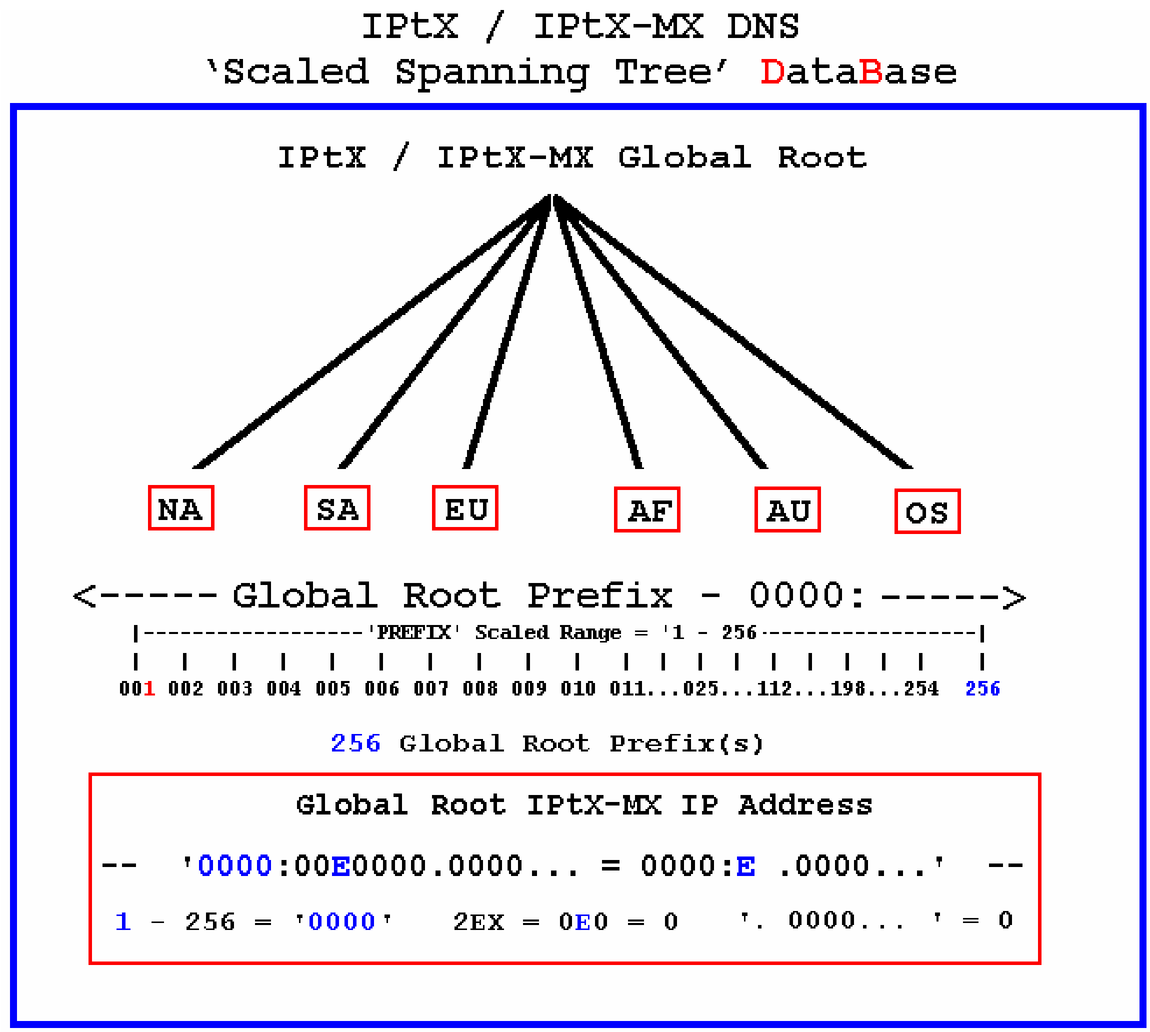
0000:2E0000.0000... - 'DNS Tag' = /XA

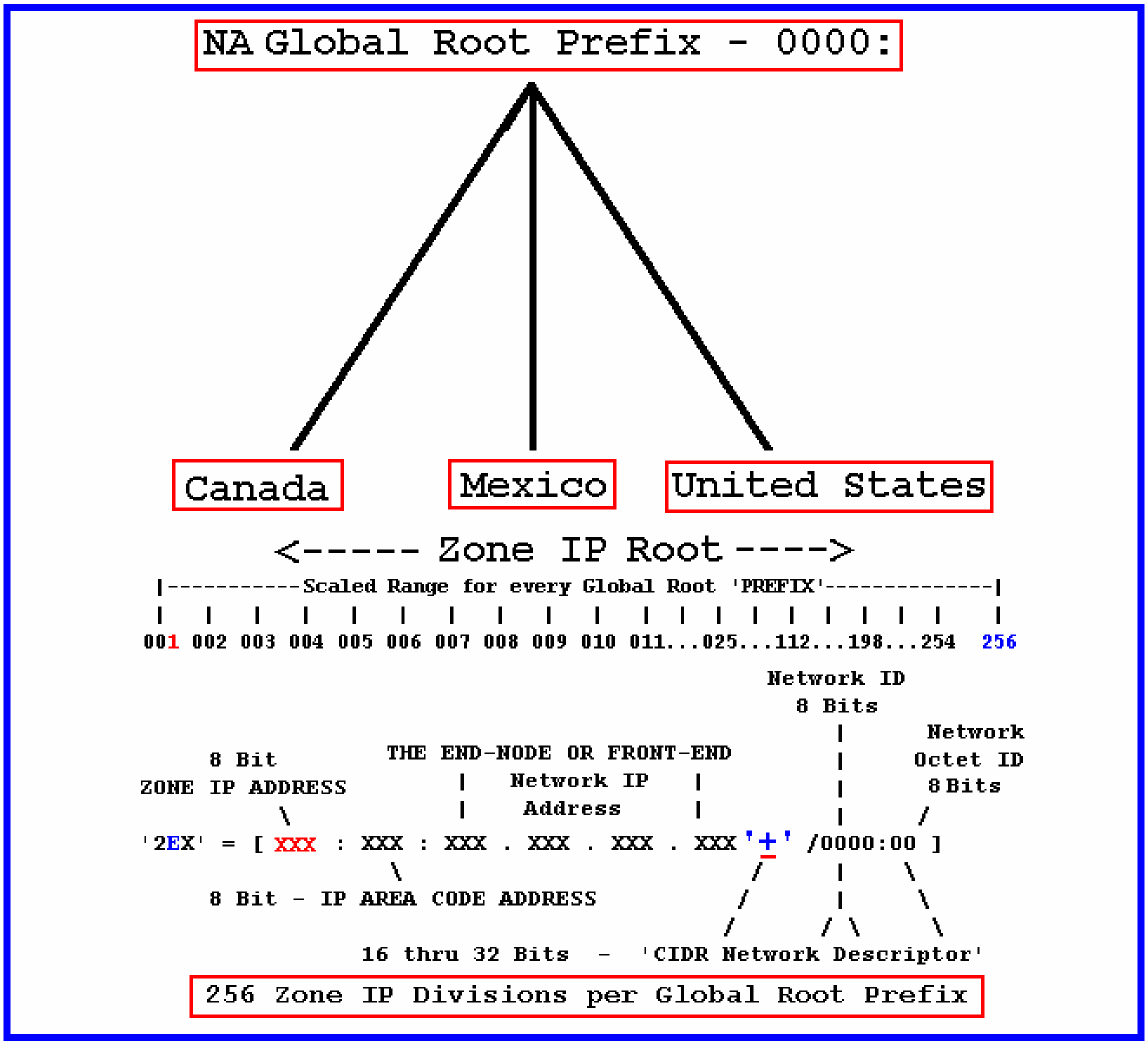
0000:2$\overline{E}$0000.0000... - 'DNS Tag' = /X$\overline{A}$

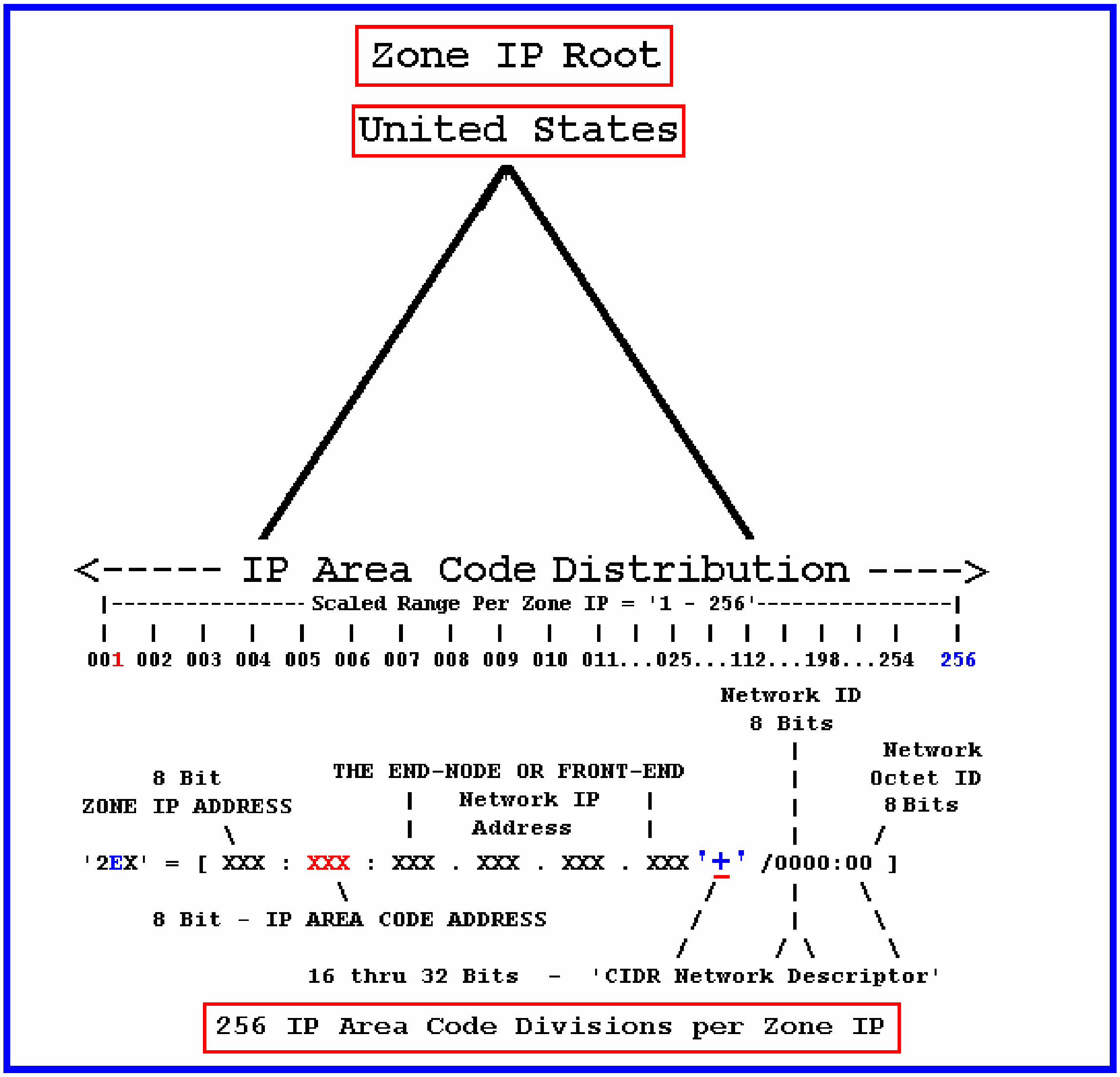
Clearly then, any translation and / or distinction available to the user, must also be defined within the code of the Operating System, and in particular, defined within the code of the 'Domain Name Service' for the IPtX / IPtX-MX DNS Specification.

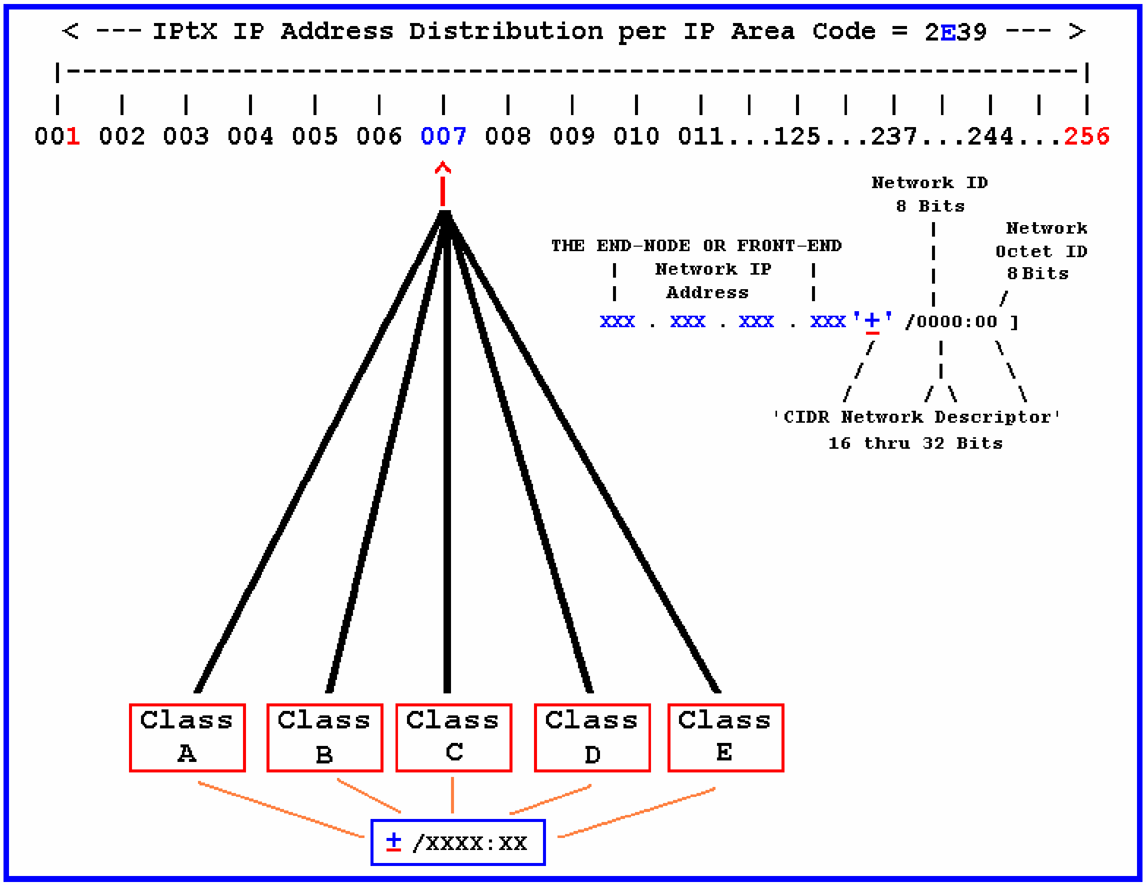
IANA Consideration

I. IPtX / IPtX-MX DNS 'Scaled Spanning Tree' Data Base for an IP Address;




NA Global Root Prefix - 0000:
Canada
Mexico
United States
<------ Zone IP Root ---->
|-----------Scaled Range for every Global Root 'PREFIX'--------------|
001 002 003 004 005 006 007 008 009 010 011...025...112...198...254 256
Network ID
8 Bits
Network
Octet ID
8 Bits
8 Bit
ZONE IP ADDRESS
THE END-NODE OR FRONT-END
Network IP
Address
'2EX' = [XXX : XXX : XXX . XXX . XXX . XXX '+' /0000:00]
8 Bit - IP AREA CODE ADDRESS
16 thru 32 Bits - 'CIDR Network Descriptor'
256 Zone IP Divisions per Global Root Prefix

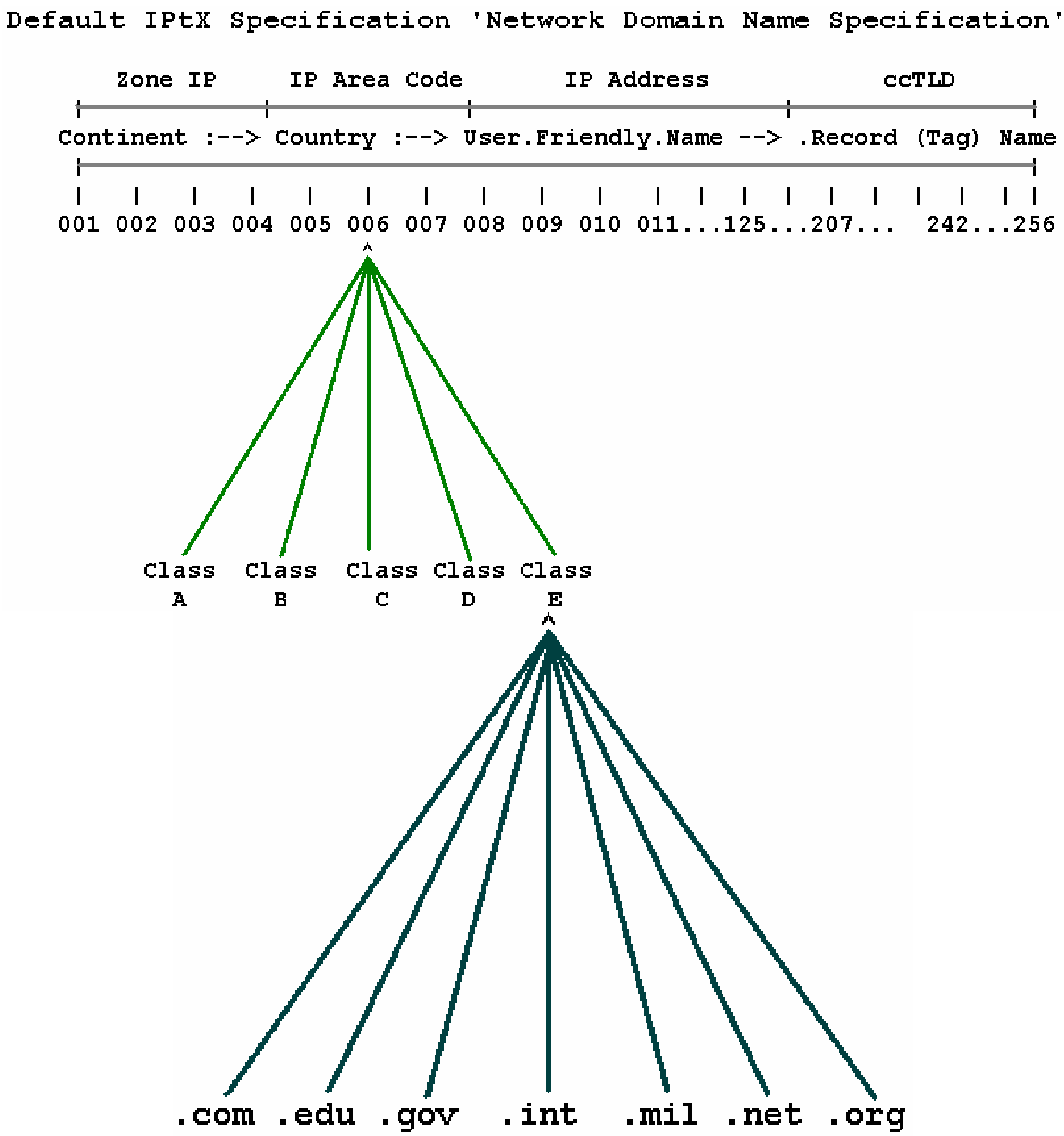

Zone IP Root
United States
<----- IP Area Code Distribution ---->
|---------------Scaled Range Per Zone IP = '1 - 256'---------------|
001 002 003 004 005 006 007 008 009 010 011...025...112...198...254 256
Network ID
8 Bits
Network
Octet ID
8 Bits
8 Bit
ZONE IP ADDRESS
THE END-NODE OR FRONT-END
Network IP
Address
'2EX' = [XXX : XXX : XXX . XXX . XXX . XXX '+' /0000:00]
8 Bit - IP AREA CODE ADDRESS
16 thru 32 Bits - 'CIDR Network Descriptor'
256 IP Area Code Divisions per Zone IP




```
   "IPtX Default 'Network Domain Name Address' Design Specification"


   Zone IP       IP Area Code        IP Address               ccTLD
 -------------|---------------|-----------------------|--------------------|

Continent :-->   Country :-->   User.Friendly.Name -->  . Record (Tag) Name
                    |
                    V
                  State
                (Province) :-->  User.Friendly.Name -->  . Record (Tag) Name
                    |
                    V
                  City
              (Town, County):-->  User.Friendly.Name -->  . Record (Tag) Name
```


Default IPtX Specification 'Network Domain Name Specification'
Zone IP
IP Area Code
IP Address
ccTLD
Continent :--> Country :--> User.Friendly.Name --> .Record (Tag) Name
001 002 003 004 005 006 007 008 009 010 011...125...207... 242...256
Class A
Class B
Class C
Class D
Class E
.com
.edu
.gov
.int
.mil
.net
.org

II. IPtX 32 / 64 Bit Header Design Specification - 'Variable IP Addressing Format Range Bit-Mapped Capacity' - e.g.; IPt1 thru IPtX

The current IP Bit-Mapped Transmission of an IP Address, is nothing more than the 'End or Station' Node Software Translation of a Binary Numerical Conversion. Clearly, utilizing the same principles and continuing to exploit of the 'DCE Unit'. The Compression Range of a 22 to 54 Bit-Mapped IPtX IP Addressing Format, can be reduces to the Bit-Mapped Length of a 32 or 64 Bit Header.

```
                     IPtX 32 / 64 Bit Header

0                   1                   2                 3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                   +-------------------+                     /
/                   | 32 Bit Header Scale|                    /
                    +-------------------+

0                   2                   4                 6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                 +----------------------+                    /
/                 | 64 Bit Header Scale  |                    /
                  +----------------------+
/           +------------------------------------------+         /
/           | IPtX 32 / 64 Bit Header Information Fields|        /
            +------------------------------------------+
|IPtX|   IHL   |    TOS & NEXT HEADER    |  TL & DIRECTION BIT  |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
| ID & SECURITY BIT |FLA| FRAG OFFSET |:IP PBX Send |/XXXX:XX   |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
| TTL-HOP LIMIT | PROTOCOL |:IP PBX Recv | CHK SUM | ConfCall   |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|    Prefix    |Exponential Decimal String = 2E 14 / 46 Bits    |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|          SOURCE ADDRESS   =     2E 22 / 54 Bits               |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|    Prefix    |Exponential Decimal String = 2E 14 / 46 Bits    |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|     DESTINATION ADDRESS   =     2E 22 / 54 Bits               |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|          2E10.12 Bits =   OPTIONS   = 2E24.30 Bits            |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|          2E10.12 Bits =    DATA    = 2E24.30 Bits             |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
|---------------------------------------------------------------|
```

Internet Protocol tX (32 / 64 Bit) Address Space

IPtX/IPtX-MX IP Address = 0000:2E0000.0000... / 0000:2Ē0000.0000...

8 Bits	8 Bits	8 Bits	39 Bits	16 Bits
Prefix :	Zone IP :	IP Area Code :	IPtX IP Address	± /XXXX:XX

Prefix -8 BIT-	Zone IP -8 BIT-	IP Area Code -8 BIT-	IPtX IP Address	CIDR Network Descriptor	Distribution Purpose	Date
None	None	None	000.000.000.000	None	None	7/2007
001	001-256:	All:	XXX.XXX.XXX.XXX	All	NA	7/2007
002	001-256:	All:	XXX.XXX.XXX.XXX	All	SA	7/2007
003	001-256:	All:	XXX.XXX.XXX.XXX	All	EU	7/2007
004	001-256:	All:	XXX.XXX.XXX.XXX	All	OS	7/2007
005	001-256:	All:	XXX.XXX.XXX.XXX	All	AU	7/2007
006	001-256:	All:	XXX.XXX.XXX.XXX	All	AF	7/2007
007-256	001-256:	All:	XXX.XXX.XXX.XXX	All	IANA/RESERVED	7/2007
IANA	001-256:	All:	000.000.000.000	All	IANA/EMERGENCY	7/2007
IANA	None	None	127.000.000.000	None	IANA/LoopBack	7/2007

SA = South America, NA = North America,
EU = European Union, AU = African Union,
AF = Asian Federation, OS = Oceania States

III. IPtX 32 / 64 Bit - DNS Header, DNS Query, DNS Resource Record, TCP Header, TCP Pseudo Header, UDP Header, and UDP Pseudo Header, Design Specification(s) -

CHANGES: IPtX DNS Services 32 / 64 Bit Header

```
  DNS Header for IPtx      |  DNS Query for IPtX  | DNS RR Record for IPtX
                           |                      |
   Identification =        |  Type = 2E18.20 Bits |  Type = 2E18.20 Bits
       2E15.25 Bits        |                      |
   Opcode = 4 Bits         |    Class = 16 Bits   |     Class = 16 Bits
                           |                      |
  Rcode = 4 Bits           |   Length Rdata =     |   TTL = Variable to
                           |      2E12.20 Bits    |      2E22.40 Bits
-------------------------|---------------------|----------------------
                              |          4 New "TYPE" Categories
TQuestions = 2E12.20 Bits     |
                              | 1. TYPE 43 = 'RNN'
TAnswers RR = 2E12.20 Bits    |            = "Reverse Network Domain Name"
                              |    Title: IN-ADDR.APARA NAME
                              |            = IN-ADDR.RNN
TAuthority RR = 2E12.20 Bits  |
                              | 2. TYPE 44 = 'RNN-PTR'
                              |            = "Reverse Network Domain
                              |               Name-Domain Name Pointer"
TAdditional RR = 2E12.20 Bits |
                              |   2 New IPtX DNS Tag(s) Specifications
                              |
CIDRNetDes = XXXX:XX          |3. TYPE 45 = XA = "IPtX (IP Address)"
  /XXXX:XX = 8 Bits           |   Where X = Integer Variable ≥ 1
                              |   - e.g. IPt1 = A, IPt2 = AA = 2A,
                              |   IPt3 = AAA = 3A, IPt4 = AAAA = 4A, etc
                              |
                              |4. TYPE 46 = XĀ = "IPtX (IP Address)"
```

DNS Header 32 Bit IPtX

```
0                 1                   2                   3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
| Identification-XXXX:XX |QR|Opcode|AA|TC|RD|RA|Z|AD|CD|Rcode |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
     Total Questions        |        Total Answer RRs
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
    Total Authority RRs     |     Total Additional RRs
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Questions
                      = 2E10.12 Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Answer RRs
                      = 2E10.12 Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Authority RRs
                      = 2E10.12 Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        Additional RRs
                      = 2E10.12 Bits
```

DNS Header 64 Bit IPtX

```
0                 2                   4                   6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
| Identification-XXXX:XX |QR|Opcode|AA|TC|RD|RA|Z|AD|CD|Rcode |
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
     Total Questions =   2E10.12 Bits =   Total Answer RRs
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
 Total Authority RRs = 2E10.12 Bits = Total Additional RRs
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Questions
                    =    2E24.30 Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Answer RRs
                    =   2E24.30  Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         Authority RRs
                    =    2E24.30 Bits
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        Additional RRs
                    =    2E24.30 Bits
```

```
                 DNS Query 32 / 64 Bit IPtX

0                 1                   2                   3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                  DNS Query 32 Scale IPtX                    /
/                                                             /

0                 2                   4                   6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                  DNS Query 64 Scale IPtX                    /
/                                                             /

/              Field Information - IPtX DNS Query             /
|                         Query Name                          |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|   32 Bit = 2E10.12 Bits   :::  64 Bit = 2E24.30 Bits        |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|   32 Bit = 2E10.12 Bits   :::  64 Bit = 2E24.30 Bits        |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
| Type = 16 Bit / 2E10.12 Bit |  Class =  16 Bit / 2E10.12 Bit |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|   32 Bit = 2E10.12 Bits   :::  64 Bit = 2E24.30 Bits        |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|   32 Bit = 2E10.12 Bits   :::  64 Bit = 2E24.30 Bits        |
|-------------------------------------------------------------|
```

```
              DNS Resource Record 32 / 64 Bit IPtX

0                   1                   2                   3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                                                             /
/               DNS Resource Record 32 Scale IPtX             /

0                   2                   4                   6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                                                             /
/               DNS Resource Record 64 Scale IPtX             /

/                                                             /
/          Field Information - DNS Resource Record            /
|                            Name                             |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|            32 / 64 Bit = 2E10.12 Bit / 2E24.30 Bits         |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|            32 / 64 Bit = 2E10.12 Bit / 2E24.30 Bits         |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
| Type = 16 Bit / 2E10.12 Bit | Class = 16 Bit / 2E10.12 Bit  |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|   32 Bit = 2E10.12 Bits   TTL   64 Bit = 2E24.30 Bits       |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|Length Rdata = 16 Bit/2E10.12 Bit|Rdata = 16 Bit / 2E10.12 Bit|
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|            32 / 64 Bit = 2E10.12 Bit / 2E24.30 Bits         |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|            32 / 64 Bit = 2E10.12 Bit / 2E24.30 Bits         |
|-------------------------------------------------------------|
```

```
                 IPtX TCP Header 32 64 Bit

0                   1                   2                   3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                    TCP Header 32 Scale IPtX                 /
/                                                             /

0                   2                   4                   6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                    TCP Header 64 Scale IPtX                 /
/                                                             /

/                Field Information - TCP Header               /
/                                                             /
|Source Port= 16/2E10.12 Bits|Destination Port =16/2E10.12 Bits|
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|       2E10.12 Bits  = Sequence Number = 2E24.30 Bits          |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
| 2E10.12 Bits  =  Acknowledgment Number = 2E24.30 Bits        |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|DataOffset 4Bit|Resrvd|ECN|Control Bits6|Window 48Bit HEX No.|
|+ + + + + +2+ + + + + + + + + + + + + +3+ + + + 24+ + + + + + +|
|Checksum=16 Bit/2E10.12 Bit|Urgent Pointer=16 Bit/2E10.12 Bit
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|    2E10.12 Bits  = Options and padding  = 2E24.30 Bits        |
|                          :::                                  |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|          2E10.12 Bits  =  Data  = 2E24.30 Bits                |
|                          :::                                  |
|---------------------------------------------------------------|

           IPtX 32 / 64 Bit TCP Pseudo Header

0                   1                   2                   3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                   32 Bit Header Scale                       /
/                                                             /


0                   2                   4                   6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                   64 Bit Header Scale                       /
/                                                             /
|    2E10.12 Bits =  Source IPtX address = 2E24.30 Bits        |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|  2E10.12 Bits =  Destination IPtX address = 2E10.12 Bits     |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
| 0  | Protocol = 8 / 16 Bits|Total length = 16/2E10.12 Bits   |
|---------------------------------------------------------------|
```

```
                 UDP header for IPtX 32 / 64 Bits

0                   1                   2                 3
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
/                   32 Bit Header Scale                         /
/                                                               /


0                   2                   4                 6
2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4 6 8 0 2 4
/                   64 Bit Header Scale                         /
/                                                               /
|Source Port = 16 / 2E10.12 Bits | Destination Port  = 16 / 2E10.12 Bits |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
| Length  =  16 / 2E10.12 Bits   |   Checksum  = 16 / 2E10.12 Bits      |
|+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +|
|           2E10.12 Bits = Data = 2E24.30 Bits                   |
|                            :::                                 |
|                            :::                                 |
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Note: There is room for improvement, i.e. TTL = 2E24.30… Bits! This is clearly Ridiculous – However, here is Backwards Compatibility at its Best. At least now, Networking the Moon, or perhaps Mars, seems plausible.

Security Considerations

This document, whose only objective was the deliberation of Information, does not directly raise any security issues. Hence, there are no issues that warrant Security Considerations.

Work(s) in Progress;

These drafts represent the twelve chapters of the Networking Bible, designing a Network IP Addressing Specification that maintains a 100 Percent backward compatibility with the IPv4 Specification. In other words, this is a design specification developed from the Theory of the Expansion of the IPv4 IP Addressing Specification, which allowed the representation of the Network for the entire World on paper, and the possibility of an Infinite IP Address Pool. Nevertheless, the Internet-Drafts listed below, "Cited as Work(s) in Progress', explain the design Specification for the development of the IPtX (IP Telecommunications Specification) Protocol Addressing System and the correction of the Mathematical Error in the Binary System.

Computer Science / Internet Technology:

1. http://www.ietf.org/internet-drafts/draft-terrell-logic-analy-bin-ip-spec-ipv7-ipv8-10.txt
(Foundational Theory for the New IPtX family IP Addressing Specification, and the Binary Enumeration error discovery after the correction.) - "Work(s) in Progress'

2. http://www.ietf.org/internet-drafts/draft-terrell-simple-proof-support-logic-analy-bin-02.txt
(The 2nd proof for the existence of another Binary System, resulting from the Error Correction.) - "Work(s) in Progress'

3. http://www.ietf.org/internet-drafts/draft-terrell-visual-change-redefining-role-ipv6-01.pdf
(Argument against the Machine dependant IPv6 deployment.) - "Work(s) in Progress'

4. http://www.ietf.org/internet-drafts/draft-terrell-schem-desgn-ipt1-ipt2-cmput-tel-numb-02.pdf
(The foundation of the New IPtX Addressing Spec compared to the Telephone Numbering System.) - "Work(s) in Progress'

5. http://www.ietf.org/internet-drafts/draft-terrell-internet-protocol-t1-t2-ad-sp-06.pdf
(The IPtX Addressing Specification Address Space / IP Address Allocation Table; establishes the visual perspective that actually represents Networking Schematic Networking the entire World on Paper.) - "Work(s) in Progress'

6. http://www.ietf.org/internet-drafts/draft-terrell-iptx-spec-def-cidr-ach-net-descrip-01.pdf
(Re-Defines CIDR) {Classes Inter-Domain Routing Architecture} and introduces the Network Descriptor for the IPtX Addressing Standard.) - "Work(s) in Progress'

7. http://www.ietf.org/internet-drafts/draft-terrell-math-quant-new-para-redefi-bin-math-04.pdf
(The 3rd Proof for the New Binary System, correcting the error in Binary Enumeration.) - "Work(s) in Progress'

8. http://www.ietf.org/internet-drafts/draft-terrell-gwebs-vs-ieps-00.pdf
(Defining the GWEBS – The Global Wide Emergency Broadcast System) - "Work(s) in Progress'

9. http://www.ietf.org/internet-drafts/draft-terrell-iptx-dhcp-req-iptx-ip-add-spec-00.pdf
(The development of the DHCP {Dynamic Host Configuration Protocol} for the IPTX IPSpec) - "Work(s) in Progress'

10. http://www.ietf.org/internet-drafts/draft-terrell-iptx-dns-req-iptx-ip-add-spec-03.pdf
(The development of the DNS {Domain Naming Specification} the for IPTX IPSpec)
- "Work(s) in Progress'

11. http://www.ietf.org/internet-drafts/draft-terrell-math-quant -ternary-logic-of-binary-sys-08.pdf
(Derived the Binary System from the proof of "Fermat's Last Theorem", and Developed the Ternary Logic for the Binary System) - "Work(s) in Progress"

12. http://www.ietf.org/internet-drafts/draft-terrell-cidr-net-descrpt-expands-iptx-add-spc-17.pdf
- "Work(s) in Progress"
(An application of Quantum Scale Theory, the 2^X : 1 Compression Ratio, the Expansion derived from the 'CIDR Network Descriptor, and the Mathematics of Quantification provided the foundation for the development of the "Intelligent Quantum Tunneling Worm Protocol"; A Routable Mathematical Exponential Expression, Backend IP Addressing Protocol that provides an (nearly) Unlimited IP Address Space using the Compression Ratio 2^X : 1.)

Note: These Drafts has Expired at www.ietf.org Web Site. However, you can still find copies posted at Web Sites all over the World. {Suggestion; Perform Internet search using "Yahoo" or "Google", Key word: "ETT-R&D Publications"}.

7. Normative References:

Pure Mathematics:

1. The Proof of Fermat's Last Theorem; The Revolution in Mathematical Thought {Nov 1979}
Outlines the significance of the need for a thorough understanding of the Concept of Quantification and the Concept of the Common Coefficient. These principles, as well many others, were found to maintain an unyielding importance in the Logical Analysis of Exponential Equations in Number Theory.

2. The Rudiments of Finite Algebra; The Results of Quantification {July 1983}
Demonstrates the use of the Exponent in Logical Analysis, not only of the Pure Arithmetic Functions of Number Theory, but Pure Logic as well. Where the Exponent was utilized in the Logical Expansion of the underlining concepts of Set Theory and the Field Postulates. The results yield another Distributive Property that is Conditional, which supports the existence of a Finite Field (i.e. Distributive Law for Exponential Functions) and emphasized the possibility of an Alternate View of the Entire Mathematical field.

3. The Rudiments of Finite Geometry; The Results of Quantification {June 2003}
Building upon the preceding works from which the Mathematics of Quantification was derived. Where by it was logically concluded that there existed only 2 mathematical operations; Addition and Subtraction. In other words, the objectives this treatise maintained, which was derived from the foundation of the Mathematics of Quantification; involves not only the clarification of the misconceptions concerning Euclid's Fifth Postulate, and the logical foundation of his work, or the existence of 'Infinity in a Closed Bound Finite Space'. But, the logical derivation of the Foundational Principles that are consistence with the foundation presented by Euclid, which would establish the logical format for the Unification of all the Geometries presently existing.

4. The Rudiments of Finite Trigonometry; The Results of Quantification {July 2004}
The development of the concepts for Finite Trigonometry from the combined foundations derived from numbers 3 and 5, and the Mathematics of Quantification.

5. The Mathematics of Quantification and the Metamorphosis of $\pi : \tau$ { October 2004}
The logical derivation of the exact relationship between the Circumference and the Diameter of the Circle, which defines the measurement of the exact length of the Circle's Circumference, τ when the Radius is equal to '1'.

6. Squaring the Circle? First! What is the Circle's Area? {January 2005}
The Rhind Papyrus Tale, and the 10,000 year old quest involving "Squaring the Circle"; Derivation of the equation resolving the Area of the Circle. An illusion perplexing the Sight and Mind of the greatest mathematicians for about 10,000 years, which maintains an elementary algebraic solution: $(\pi r \div 2)^2$ = Area of Circle.

Physics:

7. The Mathematics of Quantification & The Rudiments of Finite Physics
The Analysis of Newton's Laws of Motion…the Graviton' {December 2004}
Through the use of Finite Algebra, Geometry, Trigonometry, and # 5, investigation of the Laws of Classical Physics were found to be erroneous. This allowed the presentation of the initial work, which correct the flaws in Classical Physics, and establishes the foundation upon which there exist the possibility of a Grand Unified Field Theory for the Natural Sciences.

Informative References

1. G Boole (Dover publication, 1958) "An Investigation of The Laws of Thought" On which is founded The Mathematical Theories of Logic and Probabilities; and the Logic of Computer Mathematics.

2. R Carnap (University of Chicago Press, 1947 / 1958) "Meaning and Necessity" A study in Semantics and Modal Logic.

3. R Carnap (Dover Publications, 1958) " Introduction to Symbolic Logic and its Applications"

4. Regis Desmeules (Cisco Press, April 24, 2003) " Cisco Self-Study: Implementing Cisco IPv6 Networks "

5. Gary C. Kessler (Auerbach Press, August 1997) " Handbook on Local Area Networks "

6. R. Hinden (Nokia) and S. Deering (Cisco Systems) RFC 2373 - " IP Version 6 Addressing Architecture "

7. Hartley, R.V.L; "Transmission of Information," Bell System Technical Journal, July 1928

8. Reza, Fazlollah M.; An Introduction to Information Theory. New York: Dover, 1994.

9. David J. C. MacKay; Information Theory, Inference, and Learning Algorithms Cambridge: Cambridge University Press, 2003.

10. DNS Implementation and Security RFCs: 2535, 2931, 2135, 1035, 1996, 2845, 2930, 2671, 1183, 1706, 2163, 1712, 1886, 1876, 1002, 2052, 2782, 2168, 2915, 2538, 2230, 2671, 2672, 2874, 1995, 3123, 1996, 2182, 1101, 1123, 1279, 1296, 1383, 1401, 1464, 1480, 1535, 1536, 1591, 1611, 1612, 1713, 1794, 1876, 1886, 2163, 2168, 2219, 2230, 2308, 2517, 2538, 2539, 2541, 2606, 2845, 2870, 2915, 2929, 2930, 2931, 3007, 3008, 3090, 3110, 3027, 3071, 3130, 3123, 3152, 2537, 2137, and 2065.

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