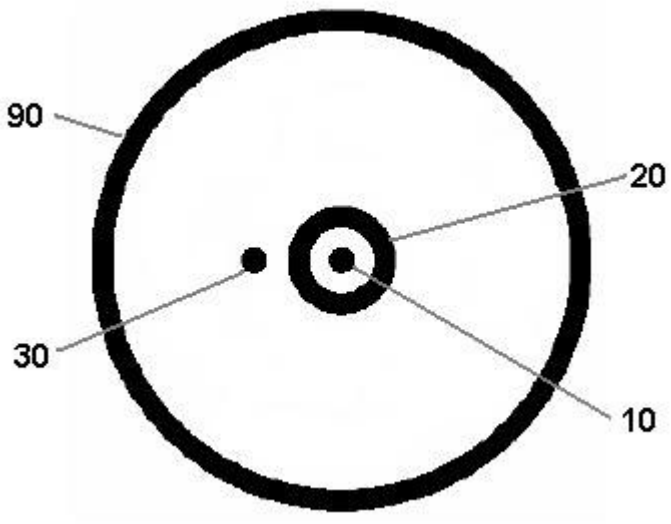


**Figure 1**

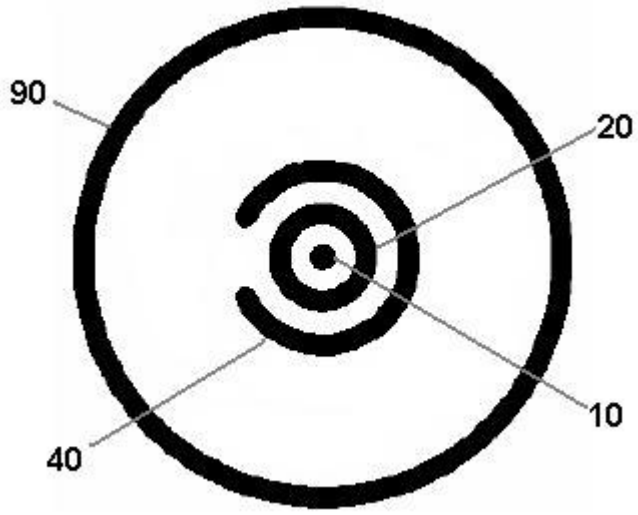


**Figure 2**

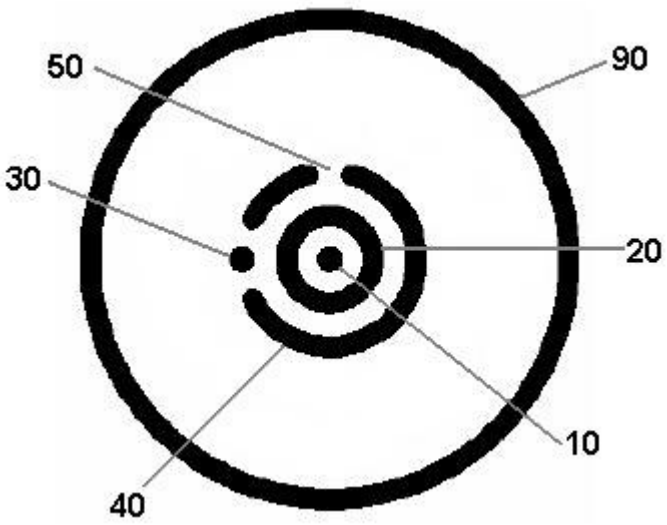


**Figure 3**

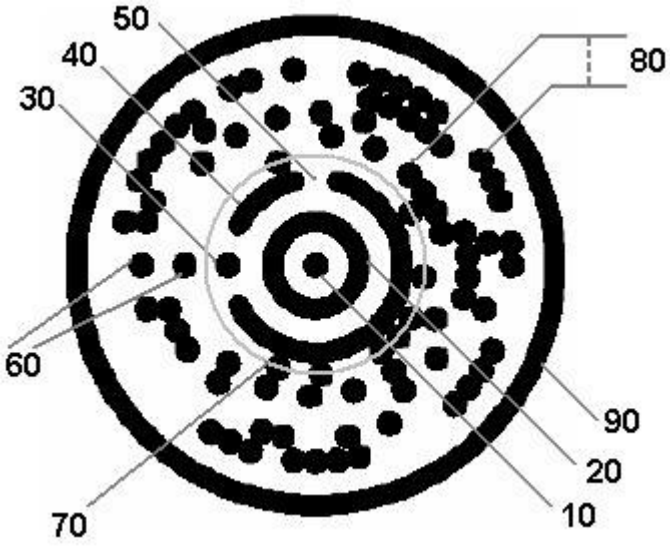


**Figure 4**

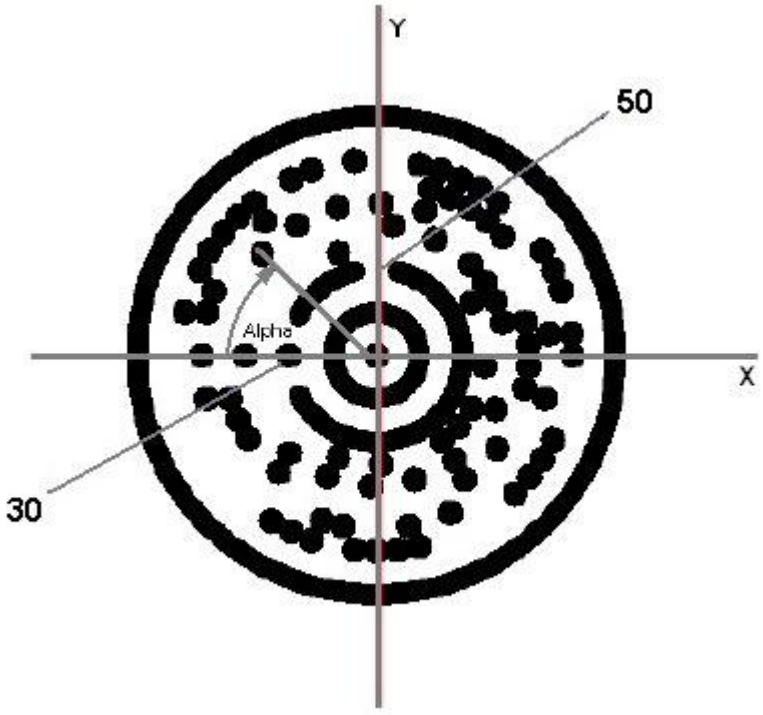


**Figure 5**

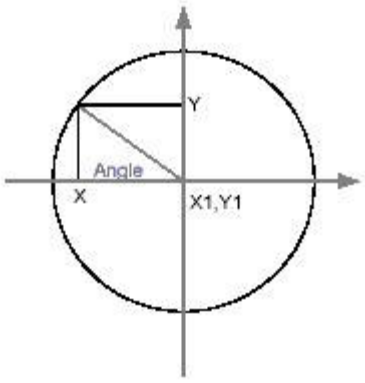


**Figure 6**

| Class | Content |
|---|---|
| 0 | Free Text |
| 1 | PIM |
| 2 | Phone number to be called |
| 3 | Message to be sent thru SMS |
| 4 | URL and Message |
| 5..7 | Reserved |

**Figure 7**

| Value | Upper | | Lower | | Mixed | | Punctuation | | Digit | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Char | ASCII | Char | ASCII | Char | ASCII | Char | ASCII | Char | ASCII |
| 0 | P/S | | P/S | | P/S | | L/L | | P/S | |
| 1 | SP | 32 | SP | 32 | SP | 32 | CR | 13 | SP | 32 |
| 2 | A | 65 | a | 97 | SOH | 1 | CRLF | 13,10 | 0 | 48 |
| 3 | B | 66 | b | 98 | STX | 2 | .SP | 46,32 | 1 | 49 |
| 4 | C | 67 | c | 99 | ETX | 3 | ,SP | 44,32 | 2 | 50 |
| 5 | D | 68 | d | 100 | EOT | 4 | :SP | 58,32 | 3 | 51 |
| 6 | E | 69 | e | 101 | ENQ | 5 | ! | 33 | 4 | 52 |
| 7 | F | 70 | f | 102 | ACK | 6 | " | 34 | 5 | 53 |
| 8 | G | 71 | g | 103 | BEL | 7 | # | 35 | 6 | 54 |
| 9 | H | 72 | h | 104 | BS | 8 | $ | 36 | 7 | 55 |
| 10 | I | 73 | i | 105 | HT | 9 | % | 37 | 8 | 56 |
| 11 | J | 74 | j | 106 | LF | 10 | & | 38 | 9 | 57 |
| 12 | K | 75 | k | 107 | VT | 11 | ' | 39 | , | 44 |
| 13 | L | 76 | l | 108 | FF | 12 | ( | 40 | . | 46 |
| 14 | M | 77 | m | 109 | CR | 13 | ) | 41 | U/L | |
| 15 | N | 78 | n | 110 | ESC | 27 | * | 42 | U/S | |
| 16 | O | 79 | o | 111 | FS | 28 | + | 43 | | |
| 17 | P | 80 | p | 112 | GS | 29 | , | 44 | | |
| 18 | Q | 81 | q | 113 | RS | 30 | - | 45 | | |
| 19 | R | 82 | r | 114 | US | 31 | . | 46 | | |
| 20 | S | 83 | s | 115 | @ | 64 | / | 47 | | |
| 21 | T | 84 | t | 116 | \ | 92 | : | 58 | | |
| 22 | U | 85 | u | 117 | ^ | 94 | ; | 59 | | |
| 23 | V | 86 | v | 118 | _ | 95 | < | 60 | | |
| 24 | W | 87 | w | 119 | ` | 96 | = | 61 | | |
| 25 | X | 88 | x | 120 | \| | 124 | > | 62 | | |
| 26 | Y | 89 | y | 121 | ~ | 126 | ? | 63 | | |
| 27 | Z | 90 | z | 122 | DEL | 127 | [ | 91 | | |
| 28 | L/L | | U/S | | L/L | | ] | 93 | | |
| 29 | M/L | | M/L | | U/L | | { | 123 | | |
| 30 | D/L | | D/L | | P/L | | } | 125 | | |
| 31 | B/S | | B/S | | B/S | | U/L | | | |

**Figure 8**

```
const TUint16 crctable[16]=
              {0x0000,0x1081,0x2102,0x3183,0x4204,0x5285,0x6306,0x7387,
               0x8408,0x9489,0xa50a,0xb58b,0xc60c,0xd68d,0xe70e,0xf78f};

TUint16 generateCRC16(TDes &data,TInt cnt,TInt PrevCrc) /* return crc16 */
{
      TUint8 tempchar;
      TUint16 i,index,crctemp;

      crctemp=PrevCrc;   /* crc-ccitt preconditioning */
      for (i=0;i<cnt;i++) {
            tempchar=data[i];
            index=(crctemp ^ tempchar) & 0xf;
            crctemp=((crctemp >> 4) & 0xfff) ^ crctable[index];
            tempchar=tempchar >> 4;
            index=(crctemp ^ tempchar) & 0xf;
            crctemp=((crctemp >> 4) & 0xfff) ^ crctable[index];
      }
      return(crctemp);
}
```

**Figure 9**

| Layer | Max info modules |
|---|---|
| 5 | 28 |
| 6 | 34 |
| 7 | 40 |
| 8 | 47 |
| 9 | 53 |
| 10 | 59 |
| 11 | 66 |
| 12 | 72 |
| 13 | 78 |
| 14 | 84 |
| 15 | 91 |
| 16 | 97 |
| 17 | 103 |
| 18 | 110 |
| 19 | 116 |
| 20 | 122 |
| **TOTAL** | **1200** |

**Figure 10**

# Figure 11

| **Class: FreeText** | **0** |
|---|---|
| Any ASCII chars | |
| Example:<br><br>Hello World!! | |

| **Class: Phone Book** | **1** |
|---|---|
| <Token><Value><CR> | Repeatable |
| Example:<br><br>N<first Name><CR><br>L<last name><CR><br>M<business mobile number><CR><br>C<company><CR> | |

| **Class: Dialer** | **2** |
|---|---|
| <phone no> | |
| Example:<br><br>+62811111111 | |

| **Class: SMS** | **3** |
|---|---|
| <Recipient><CR><Token><Data><CR> | <Token><Data><CR> is repeatable |
| Example:<br><br>+62811111111<CR>KTest<CR>AName<CR>NAge<CR><br><br>Recipient Format:<br><O><C>Recipient Number<br>O means using the MTM method (default is Datagram method)<br>C means need user confirmation<br><br>Token:<br>K makes the <Data> as a constant message<br>A makes the <Data> as a user input ascii message<br>N makes the <Data> as the label of a user input numeric message<br>d makes the <Data> as the label + (ddmmyy) of a user input numeric message<br>D makes the <Data> as the label + (ddmmyyyy) of a user input numeric message<br>I makes IMEI code is appended in the message<br>T is the message alternate display text<br>M is the Recipient alternate display text<br>P is to send the personal informations like email and phone number appended to the | |

| |
|---|
| data<br>S is to provide the security index value, a security message will be added at the end of the message |

| **Class: URL** | **4** |
|---|---|
| <URL><CR><Token><Data><CR> | <Token><Data><CR> is repeatable |
| Example:<br><br>http://www.hello.com?<CR>KTest<CR>AName<CR>NAge<CR><br>K makes the <Data> as a constant message<br>A makes the <Data> as a user input ascii message<br>N makes the <Data> as a user input numeric message<br>I makes the IMEI is appended in the message | |

| **Class: Param** | **5** |
|---|---|
| <Code><CR><Token><Data><CR> | <Code><CR><Token><Data><CR> is repeatable |
| Example:<br><br>SG<CR>OTELKOMSEL<CR>N1234<CR><br>SG means Shoot&Go parameter<br>Ooperator name<br>Noperator shortcode | |

| **Class: Extended Class** | **7** |
|---|---|
| <ext class code> | 4 bits |
| Example:<br><br>1<data> | |