GPS Marker M100/70/130/80 terminal
PROTOCOLS

Terminal's packet type 1 (not used already)

no info

Terminal's information packet type 2 (active)
each packet is a text string (array). Terminal sends to server next information packet only after recieving confirmation packet from server!

header (each packet begins with this prefix)
packet type: 2 - new packet type
Cycle packet counter, HEX 00..FF
IMEI (IMEI of GSM Module)
Date&Time: DDMMYYhhmmss (this is time of fixed coordinates)
latitude: N/S GGMMmmmm
longitude: E/W GGGMMmmmm
speed, km/h, decimal
angle, grad, decimal

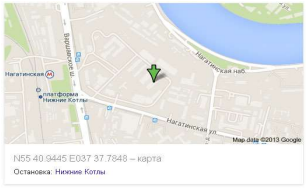
```
  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58
$  G  M  2  0  0  3  5  0  1  2  3  4  5  6  7  8  9  0  1  2  T  1  0  0  5  1  1  1  2  3  3  0  0  N  5  5  5  1  6  7  8  9  E  0  3  7  5  6  1  2  3  4  0  0  0  0  0  0
```

Sattelites number
Battary charge in Volts*10 (for 4.5V it will be 45)
Inputs, Hex, bits(h.-l.): 0(always zero),Vext (1 - M100 external powered, 0 - M100 battery powered), OnBoardButton (1 - pressed, 0-unpressed), InputLine(1 - logical "1" on this pin, 0 - logical"0" on this pin)
Statuses, HEX, 4 BIT (h.-l.): reserved, AlarmHit (1 - was hit , 0 - normal work), AlarmMoveOn (1 - was MoveOn, 0 - no MoveOn event), RelayStatus (1 - Relay is on, 0 - Relay is off)
Temperature, grad.Kelvin: ttt
Suffix (the end of packet flag)

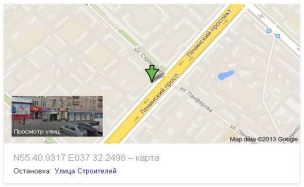
```
 59 60 61 62 63 64 65 66 67
  3  5  2  3  0  2  9  8  #
```

Note: GPS coordinates (according NMEA protocol): GG-graduses, MM-munutes, mmmm-part of minutes. Leading zeros are required!

Examples:
M100 to server: $GM203869158008465490T310513165027N55409445E037377848000007557303 03#
Server to M100: __03 (and CR+LR)



M100 to server: $GM235869158006504878T251112162434N55409317E037322498000061666703 03#
Server to M100: __35 (and CR+LR)



Server answer (necessarily!!!).
It is necessary to answer each packet reciewed from Terminal M100! Otherwise M100 will send same packet, not new.

2 underscores is the Prefix of server answer
NN - is the copy of Cycle counter from recieved M100 packet (just copy this 2 chars from incoming packet: offset 4 and 5 from incoming packet)
CR+LR is the necessary sufix (end of answer packet)

```
_  _  N  N  CR LF
```

где NN - копия поля циклического счетчика пакетов (байты со смещением 4 и 5), завершается CR,LF

The next step will be control protocol of M100 (described down). I will translate it asap.