

Available information:

The waypoint names will be in the following format:

"DS1068"

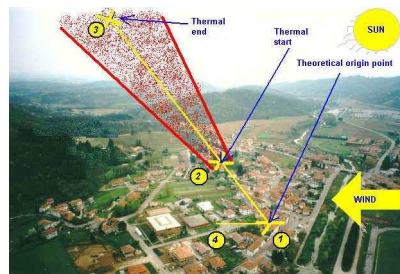
"D"=thermal class (200-300m)

"S"=south wind (135°-225°)

"1"=average climb rate in m/sec (0.5-1.4)

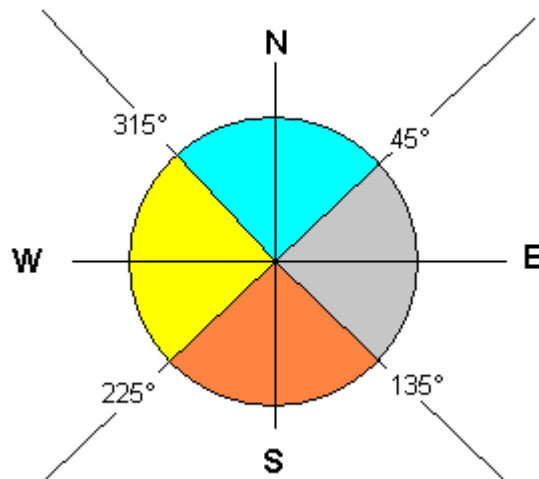
"068"=thermal start altitude in meters x 10 (680m)

With greater detail, the available data are: the geographical coordinates of point "2" (see picture below) where you started to climb into the thermal, the thermal extension as altitude gain between points "2" and "3" (this is referred to as thermal class like "A" or "B", but is also expressed with a numerical value in meters in the waypoint comments); the average climb rate is calculated dividing the altitude gain between point "2" and "3" by the time in seconds that you needed to climb the thermal to its highest point (also this data are shown in the waypoint comments); and the altitude of point "2" in meters x 10.



(Thermal representation on a landscape – the theoretical trigger point is the village center)

The indicative wind direction is given as "S", "E", "N", "W", but also as a numerical value in degrees, in the waypoint comments; this is obtained by calculating the coordinate difference between points "2" and "3". As per the following table: S=south (135°-225°), E=east (45°-135°), N=north (315°-45°), W=west (225°-315°)



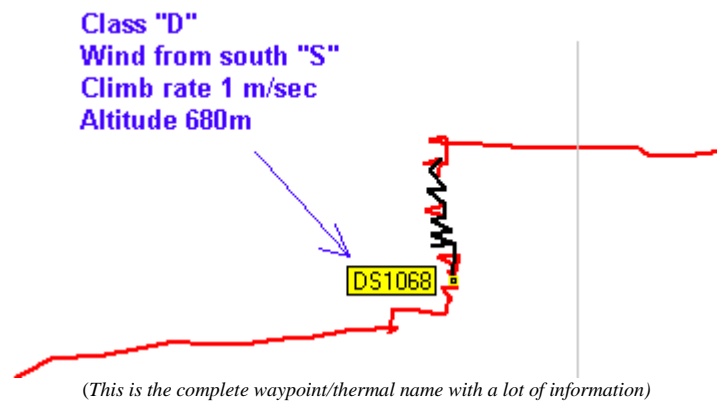
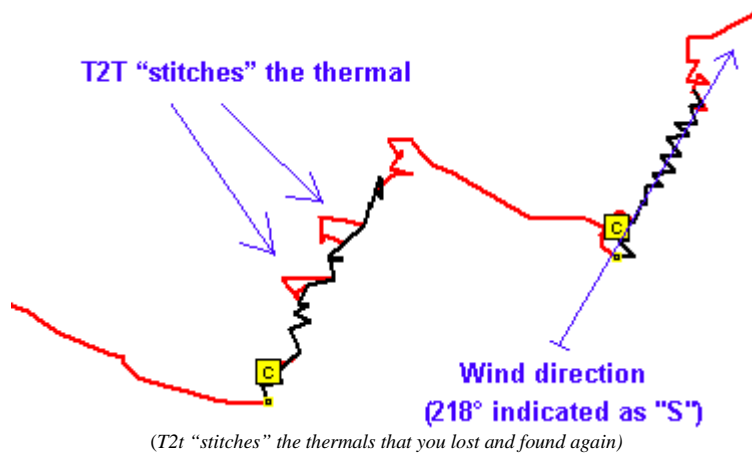
(Thermal drift indication – wind direction)

I believe this information is interesting and can help the pilot to find the thermals. Please keep in mind that this info is static and historical, i.e. it is calculated from flights made in the past and with given weather conditions (wind, sun position and strength, etc.) and do not imply that the thermal will be there, since too many are the factors of influence. In reality, however, the thermals have proven to be most times in the same place... As the WinPilot author suggests [in this note](#) much more information is available with the aid of a computer: first and foremost, the position of point "1". Hence, by taking into account the wind direction and sun position, it is possible to make a rather precise guess of the actual thermal position in real time. We suggest you to buy WinPilot and a handheld computer... If you have a GPS instead and you don't like the idea of bringing a

computer aloft and spending extra money, then T2T is your best choice!

T2t cannot calculate the position of point "1" since it does not know the height of the terrain above sea level in that point. Your GPS does not tell you if you have the plain below at 50m ASL, or Mt. Everest at 8000m ASL...
but we are working on this!

If you turned perfectly all thermals from their bottom to their tops, then you are excellent pilots! But it can also happen to turn a thermal a little too wide and to get out of it, losing some height before you find it again. T2t comes handy in this case, as it "stitches" the thermal as if you never exited it, and understanding it was just one thermal instead of two, three, or more.



CLASSES:

I used this table to divide the thermals into classes by their relevant altitude gain, but you can tailor it to you needs:

- A=800m and more
- B=600 to 800m
- C=300 to 600m
- D=200 to 300m
- E=100 to 200m

WIND DIRECTION:

- S=south (135°-225°)
- E=east (45°-135°)

N=north (315°-45°)
W=west (225°-315°)

AVERAGE CLIMB RATE:

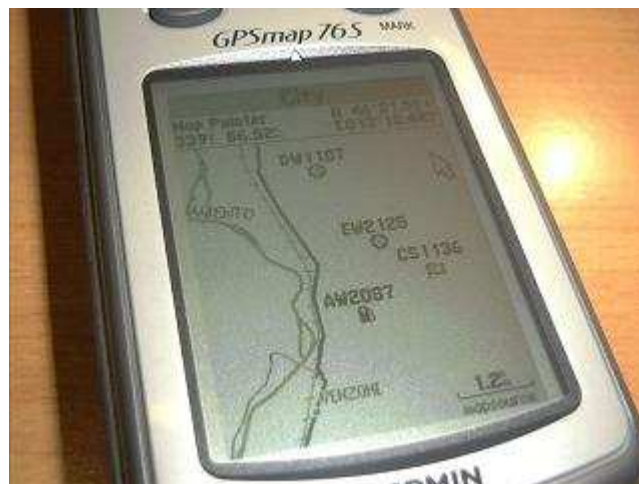
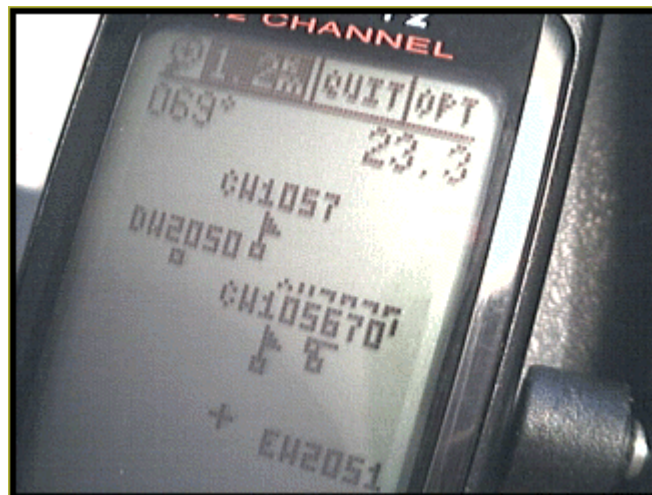
in m/sec, rounded to the nearest integer

- 0 = 0.0 - 0.4
- 1 = 0.5 - 1.4
- 2 = 1.5 - 2.4
- 3 = 2.5 - 3.4
- 4 = 3.5 - 4.4
- 5 = 4.5 - 5.4
- 6 = 5.5 - 6.4
- 7 = 6.5 - 7.4
- 8 = 7.5 - 8.4
- 9 = 8.4 and beyond

ALTITUDE INDICATION:

In a similar fashion to the classical waypoint names, it indicates the altitude where you started to turn the thermal. The value is expressed in meters x 10

- 075 = 750m
- 128 = 1280m
- 014 = 140m



(Some waypoints/thermals as they appear on the GPS)