Romanian perspectives on orienteering mapping

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Agenda

Context

Propositions

Context

Mapping for long distance at 1/15000 was introduced 30 years ago (ISOM 1982)

Mapping can presently be more precise due to progress in technologies :

- Photogrammetry,
- High resolution ortho-photogrammetry,
- GPS,
- LIDAR
- Portable tablet and adapted software

Context

Paragraph 3.1 of ISOM specifies that :

The scale for an orienteering map is 1:15 000. Terrain that cannot be fieldworked at a scale of 1:7 500 and legibly presented at a scale of 1:15 000, is not suitable for international foot-orienteering.

This rule excludes a lot of terrains and is perceived as a putting a curb on the development of orienteering

Context

Complex terrains offer new thrills to the orienteers and are largely welcomed by most of the experienced ones.

Complex terrains evolves generally at a slower pace than simple ones (less forestry work, …) making the mapping a good investment.

Context

Orienteering should remain the type of sport for which you only require a map and a compass,

and not the type of sport for which you require a map, a compass, and a magnifier glass,

without altering the quality of maps, and their readability

Proposition 1

1) Adapting map's scale to the terrain's complexity, and the possibility of using the 1/10 000 scale on long distance races.

1/10 000 is only 1.5 times clearer than 1/15 000

Choosing the right scale, must be done based on the terrain's complexity, and the feature density, **not based on the course length**.

Proposition 2

Reconsidering the sizes of the map symbols defined in 3.3 :

"All features smaller than the dimensions above must be either exaggerated or omitted, depending on whether or not they are of significance to the orienteer. When a feature is enlarged, neighbouring features must be displaced so that the correct relative positions are maintained."

Smallest area enclosed by a dotted line: 1.5mm(Ø) =1590 m^2

Smallest area of colour :

Blue, green, grey or yellow full colour: 0.5mm^2 = 112 m^2

Black dot screen: 0.5mm^2 = 112 m^2

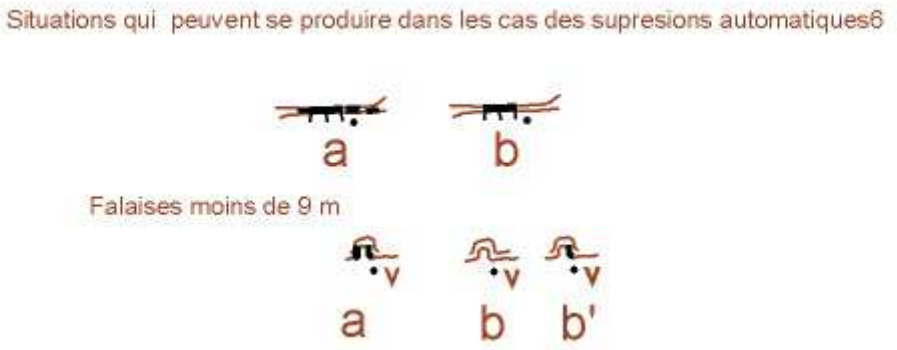
Blue, green or yellow dot screen: 1.0mm^2 = 225 m^2

Proposition 2 –a

Reconsidering the sizes of the point features, so they won't interfere with the other features on the map.

An object of 5-9 m must have a higher priority than a 1-5 m object when being drawn on the map.

A good example is symbol 201 or 203 (9m) vs. 206 (1-2m)



Proposition 2 –a

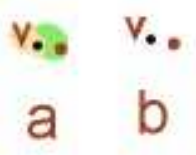
Reconsidering the sizes of the point features,)

Butte de 1hauteur 5 m diametre et colline de 2 m hautteur et -7,5 m diametre

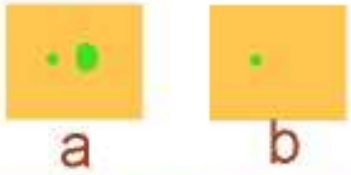
Proposition 2 b

An area of 112.5 m² or 225 m² must have a higher priority when compared to an object of 1-5m :

All the point features vs. minimal sizes of 401, 403, 406, 408, 410 (1-5m vs. 112.5 m², respectively -225 m²).



Simboles punctuels plus grands de 1 m, taches de vegetations moins de 225 m2

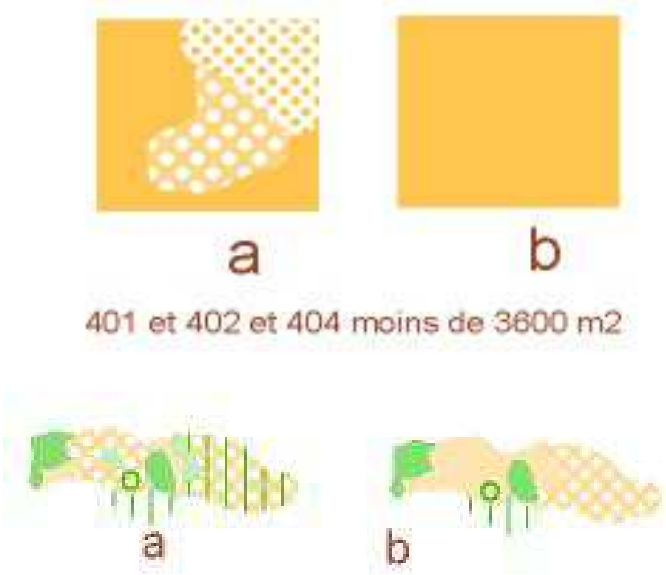


Simbol punctuel et tache vert 3 de - 112,5 m

Proposition 2 b

Reconsidering the minimal sizes of the area features.

Areas smaller than 10 mm^2 = 2250 m^2 / 16 mm^2 = 3600 m^2 at the maps scale are shown as open land / rough open land



Proposition 3

The possibility of using some symbols on 1/10 000 scale increased by only 25% (or even less) in technical terrains (as at WOC 2003).

When migrating from 1:15000 to 1:10000 or 1:7500., a coefficient between 1 and 1.5 would be possible (meaning that even the same size symbols could be used).

Proposition 4

Revise symbols 103, 106, 203, 211, 402, 404, 407 and 409 to offer better readability.

Changing symbol 403 from 50% yellow to 70% yellow to offer better readability and to remain consistent with symbols 401, 402 and 404.

Land forms reading must be given priority on the map, especially in technical terrain and symbols 208, 210 must not hide contour lines.

Proposition 5 a

Creating new symbols to improve readability.

Symbols 507.1 and 508.1 for rocky areas. In areas with many black symbols (stony areas, rock faces, small houses) symbols 507 and 508 drawn with black and red (or 50% purple) like it's being done on many touristic maps.

Green patches (similar to symbol 420) combined with open land or rough open land (401 or 403) for semi open areas with undergrowth, perhaps with two degrees of intensity.

Proposition 5b

Creating new symbols to improve readability.

Open land with little undergrowth

Open land with a lot of undergrowth but with spaces for running at race speed (areas commonly seen in southern Europe)

Introducing a new color for magnetic North lines so that it doesn't hide contour lines and it can be easily distinguished in marshy or rocky areas .

Proposition 6

Printing in 5 colours (Pantone) for technical terrains.

Conclusion

As in 2000, ISOM evolved to take into account the new drawing and printing techniques, it seems to us that ISOM could now take into account the evolution of mapping techniques.

Thanks for your attention.