To:
IOF Map Commission
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First input to the ISOM revision project from the Norwegian Orienteering Federation

In general, the ISOM2000 is a good specification for orienteering maps. The level of generalisation and the map scales seem adequate for international orienteering competitions.

Norwegian orienteering maps are becoming more detailed, and there is an accompanying trend towards larger map scales. Better basemaps, smaller mapped areas and older participants are some of the driving forces behind this development. We are not satisfied with this development, and are very glad to get support from the IOF map generalisation project. For your information, we have had map generalisation on our map meeting agendas several times the last years.
We have observed that non-standard symbols are occasionally used for international orienteering competition. In our opinion, the greatest asset of international orienteering is that we have standards for orienteering maps that are applied all over the world. When these standards are not followed, it poses a threat to the fairness of international orienteering. ISOM compliance is very important!

Some comments/issues:

The "introduction" to the ISOM2000 (chapters 1-3) is very well written, and does not need much revision, in our opinion.

Form lines and contour interval:

We have seen many cases of excessive use of form lines (103) in international orienteering competitions. Some countries seem to have developed a tradition of including form lines between all contours, thus making the terrain appear twice as steep. In such situations, it would be much better to use 2.5m contour interval, and avoid the use of form lines completely. However, most of the form lines provide no information at all, and should instead be removed. The fact that form lines are dashed is also a complicating factor, as winding and bending dashed lines can be very confusing if their drawing is not done with extreme care.
It would be nice if this is taken into consideration in the ISOM revision process. Should a strict limit to the ratio of total length of form lines to total length of contours be introduced? Should form lines be turned into continuous (not dashed) lines and made thinner (or with a different colour)?...

Minimum spacing between symbols:

ISOM2000 does not give a minimum spacing between map symbols, except for line symbols. How close can two small knolls (112) be placed? How much white space must there be between a contour and a small knoll (112)? What about symbols of different colour (small knoll – boulder)? We think it is necessary that the ISOM provides some guidance.

Printing:

The chapter on printing should be revised.

Spot colour offset printing is currently superior to other printing techniques, and it is important that this way of printing will be possible also with the revised ISOM. This means that one should be restrictive when it comes to adding new colours.
A better way of specifying the standard colours for orienteering maps is needed. Such a colour specification must make it easier to do colour calibration for the printing equipment. CMYK does not seem to be the best solution, as the optimal CMYK values depend on both the paper used, the Cyan, Magenta and Yellow colours used and the characteristics of the printer (not all printing systems use CMYK).
We would like the use of overprinting effect to be made mandatory in the next ISOM.

Some symbol issues

407/409 (green vertical stripes)

1) Green vertical stripes mess up the map, and make contours less readable. A change to a regular pattern of small green dots has been proposed in Norway, but when combining with yellow, this will probably cause unwanted effects.
2) The amount of green for 407/409 is too small, compared to 406/408. At a glance (when making a route choice) 409 is easily mistaken for 406, since the amount of green is similar (409 is even slightly less green). This is not a good situation, because their runnability is significantly different.

Minimum graphical dimensions:

Could some of the point symbols be made smaller without compromising their readability?
Examples of input we have had:
Building - ruin: The minimum building symbol is 0.5mm x 0.5mm. The minimum ruin symbol is 0.8mm x 0.8mm. It is often very difficult to fit in small ruins, and some would like a smaller minimum dimension ruin symbol.
The "cairn" symbol (537) is very big. Many of our mappers have problems with that.
There are also other symbols that take up a lot of space on the map.

Colour:

It is unfortunate that paths, tracks and roads are rendered in the same colour as cliffs and boulders. Purple has been proposed as an alternative colour. A problem with this is that the overprint colour is also purple, so there could be conflicts. Also, adding a new colour is costly when printing in spot colour offset.
Vegetation boundaries (416, (414)) are rendered in black in ISOM2000. In rocky terrain (lots of boulders, stony ground and cliffs), this is a big problem.
We would suggest that the rendering of vegetation boundaries is investigated further. Using a solid thin green line seems like a logical alternative, since green is used for vegetation already. A problem with green is that vegetation boundaries within or around 410 (Vegetation: very difficult to run, impassable) will not be visible, and the contrast to other shades of green might also be a problem.
(There was also some experimentation with putting "slope" lines on vegetation boundaries in Norway in the 1980ies. The "slope" line would point in the direction of lowest vegetation, and could be used if this was not apparent from the context (e.g. yellow on one side of the boundary), and useful information to the competitor. Should this be considered?)

Impassable vegetation (ISSOM symbol 421)

Impassable vegetation has made it into the ISSOM. Should it also be included in the ISOM?

Use of dots of different sizes (trees)

It has been suggested to use green dots of different sizes for trees of different sizes, in the same way as for boulders. A problem with this is that when the dot gets larger, it can more easily be confused for an area of 410 (vegetation: very difficult to run, impassable).

Better than normal runnability

We have two symbols that show better than normal runnability, and they are available for open and semi-open areas (401 and 403). We do not have the same possibility for areas that are not open. Could something be done? - a very light yellow screen, for instance.

Regards,

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Chairman of the Norwegian Orienteering Federation's Map Committee