

LDraw Tutorial (XIV)

MILS with BlueBrick (III)

By Jetro

In the second part of this article on MILS with BlueBrick (in HBM014) I explained how to create connection points in those places where the continuity of the diorama through various modules requires special attention. Plain modules or with a border at base level and without special characteristics like rivers or roads that determine how they relate to the surrounding modules don't need special indications. I explained how to create these points, modifying the descriptive XML file of the module to incorporate connection points in the module types that had been seen then: roads, paths and tracks on one side and rivers on the other. These modules are similar in that they follow the MILS standard 100% and these characteristics are always halfway one or more of the sides of the module.

However, there are other types of modules that have different characteristics. An example of these are coast modules. In these modules, where land and water meet, exactly half a side is occupied by land and the other half by sea. This symmetry allows us to apply the same criterion as in the case of roads and rivers and place the connection point in the centre of the side.

In the MILS article of this issue we have seen two types of modules with an elevated profile: hills and mountains. In these modules the diversity of profiles is much greater, so we will need to modify the way to apply connection points.

Why include connection points?

As has been mentioned in the previous article in this series, connection points are a characteristic of BlueBrick that allow you to join elements with similar characteristics in an easy way. After placing a first element, its default connection point - as specified in the XML file - is marked. If this is not the point you want to connect to you simply need to press "Enter" until the connection point of your choice is selected. Now, to add the next module you only need to click on its icon in the parts library. Not only will the part be added, but it will be connected with a possible connection point. In the case of a road that would be one of its ends. If you wish to change the side that is connected, simply press the space bar.

In addition to ease of use, the fact that BlueBrick only allows possible connections can be a big advantage when organising a MILS diorama. Seen from above, a flat module and another one with a hill may look virtually identical. Adding connection points for different types of terrain is a comfortable way of documenting the elevation of the edges of the module.

Connection points for hills and mountains

Looking back at the explanations regarding hills and mountains you can see there are three basic types of elevation: short, long and full (elevated along the whole extension) and these can be combined in different ways. To differentiate between types of profile the following configuration should be followed:

Long: since this elevation takes up the entire length of a side a single connection point will suffice. This does however not indicate the direction of the inclination of the hill or mountain, so a contrasting coloured dot should be included to indicate the highest point. In hills which are predominantly green this could be DBG and in mountains it could be the other way round. You can of course also use a more distinctive colour like red.

Short: takes up half of the side of a module, so the location of the connection point should be at 8 studs from the corner (exactly in the middle of half a side). Since a short profile can be combined with another short one on the same side this allows for indicating a second short profile. In the case of two short profiles, these can be placed with the tops in the corners or in the centre of the side, so in order to indicate the highest point, the top should again be highlighted in a distinctive colour.

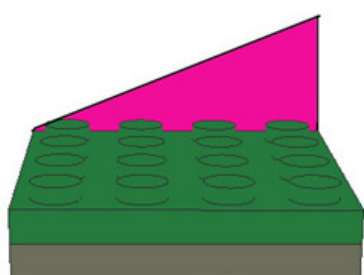
Full: this profile has no inclination so no "highest point" exists. Since it can take up a full side (32 studs) as well as half a side and combine with a short profile, the location of the connection point should be at 8 studs from the corner, so 2 connection points fit on one side. In order to distinguish this point from a long or short profile, the point must be of a different colour.

The following table contains the connection points for placing a single point in the centre (in bold) or at a quarter of the length of the side of a MILS module.

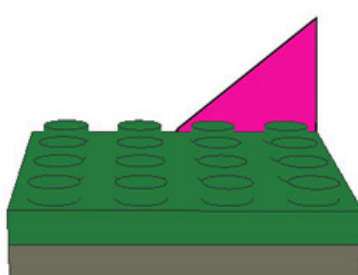
	X	Y	Angle
A	0	-16	-90
A1	-8	-16	-90
A2	8	-16	-90
B	16	0	0
B1	16	-8	0
B2	16	8	0
C	0	16	90
C1	8	16	90
C2	-8	16	90
D	-16	0	180
D1	-16	-8	180
D2	-16	8	180

Of course the angle to the previous and following connection points as well as the preferred order of the connection points must be adapted according to the number of actual points included in the descriptive XML file of the module.

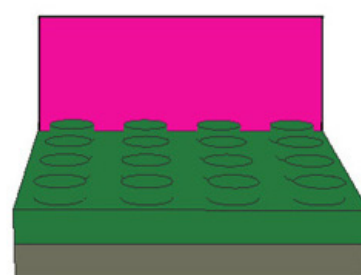
#



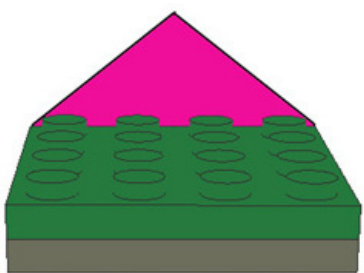
Long profile



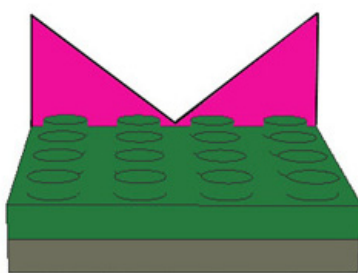
Short profile



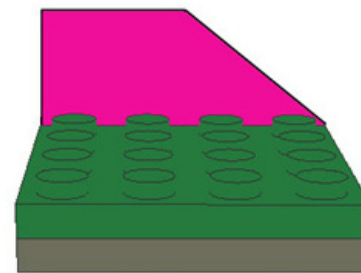
Full profile



Double short profile



Double short profile



Full & short profile