

Modular Integrated Landscaping System (I)

One of the goals of the HispaBrick Magazine® community is to build large dioramas about different LEGO® themes. In order to be able to make those dioramas all together, in an organised way, we decided to establish a set of rules. Those rules are going to be described here and in the next issues of the HispaBrick Magazine.

By Legotron (A. Bellón)



The development of this set of rules has been called **MILS**, acronym for Modular Integrated Landscapes System. As the name suggests it is based on a group of modules that are integrated to build a common diorama. The **MILS** rules specify the way we want to carry out this integration and the elements that are expected to be built by everyone who wants to collaborate with us.

Among the objectives of the **MILS** rules the most important is to establish a way to integrate the elements of different builders in a proper way, by using only a handful of rules. These rules must be very easy to carry out and explain. Another important task is to integrate the elements that are not under these rules with the ones that are covered by **MILS** rules. This is a important guideline in order to allow non **MILS** elements to stay in our dioramas without any kind of modification.

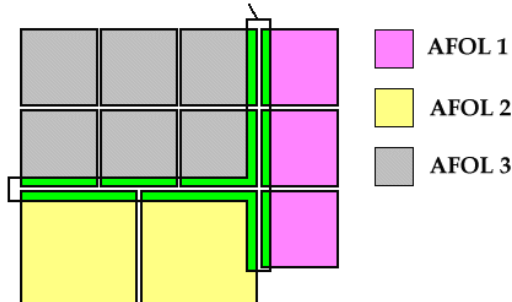
To sum up, when all our thoughts were mixed in order to build up the **MILS** rules to carry out our dioramas, the next premises were taken in account:

- It should be modular and flexible.
- The basic terrain unit should have known measures in order to plan the dioramas.
- The system should be compatible with other elements that are not under the criteria of the rules we want to define.
- It should be as simple as possible.

Moreover, we want to make a real demonstration of our rules.



MILS rules



So we, the members of the HispaBrick Magazine team, are going to prepare all the needed elements to build our modules and use them in our dioramas. That is a nice way to check the efficiency of the **MILS** rules. We will try to show this progress in the next issues of the magazine.

Basic rules.

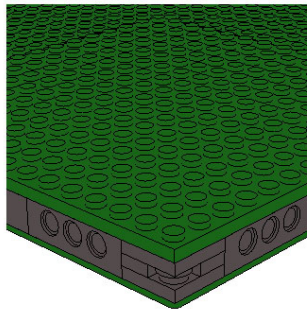
+ Modular System: **MILS** rules are based on modules. These modules will be in different categories that will be reviewed later.

+ Flexibility and simplicity: in order to simplify the rules the **MILS** modules will have very few limitations. **MILS** rules aren't about the content, quantity or quality of the MOCs built on these modules. They are written to describe the ways to get a proper connection between the different elements of a diorama, and to ease the planning of that diorama..

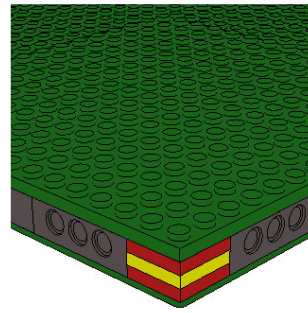
+ The basic size of the **MILS** modules: In concordance with the above mentioned premises, we have to define the basic size of a **MILS** module. This size will be 32x32 studs. All the modules under the **MILS** rules must have this measure. This 32x32 sized modules will be called BTU (Basic Terrain Unit) in order to simplify concepts.

It is very important to highlight that this idea doesn't mean that modules of other measures than 32x32 are going to be banned of our dioramas. This just states that the elements that anyone wants to integrate in our dioramas must have some way to connect its sides to our 32x32 modules. And this doesn't apply to all the non **MILS** elements, just to those that will be in contact with our **MILS** modules. Furthermore, there is no need for all the elements of the diorama to be 32x32 or multiples of this measure. This restriction is applied only on the sides where the elements of different builders are connected.

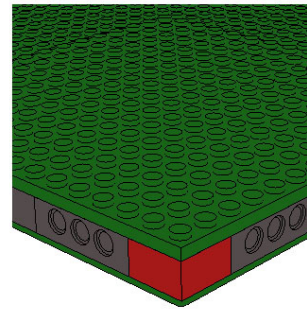
+ Concept of applicability: Every diorama built under **MILS** rules can be composed of **MILS** modules and non **MILS** modules. The minimum requirement under these rules are that any elements that will serve to connect modules from different builders should follow the **MILS** rules, in order to ensure the proper connection of the different parts. Elements that are not going to be in contact with those of other builders can be built according to the criteria of each participant.



Legotron



HispaBrick Magazine



Jetro

The next step in the description of **MILS** rules is about the definition of the specific elements that are in agreement with the **MILS** rules:

- BTU modules (Basic Terrain Unit), with a fixed size of 32x32 studs.
 - BTM (Basic Terrain Module). These are 32x32 modules with all 4 sides compatible with the **MILS** rules system, so that they can be oriented in any direction in the same place without breaking the continuity of the adjacent elements or modules. For example, a green module inside a meadow, or a water module in the middle of the sea. They are not intended to be a mere plain modules, they can have many constructions on them, unless those features require a counterpart in the other side of an adjacent module, like a road or railway.
 - CTM modules (compatible terrain module). These are 32x32 modules that are built with at least one of their sides compatible with **MILS** rules. They cannot be freely oriented because they affect the coherence of adjacent modules or they contain a feature that surpasses the size of the module. For example, a module with a seashore, a mountain that is larger than 32x32 studs, a road or a railway
- TTU modules (Transition Terrain Unit): of variable size.
 - The TTMs (Transition Terrain Module) are modules of different sizes that can be used to connect BTM modules with other modules that do not follow MILS rules. For example, you can use 6 16x8 baseplates to connect 3 **MILS** modules with 2 48x48 baseplates of 4 bricks height.

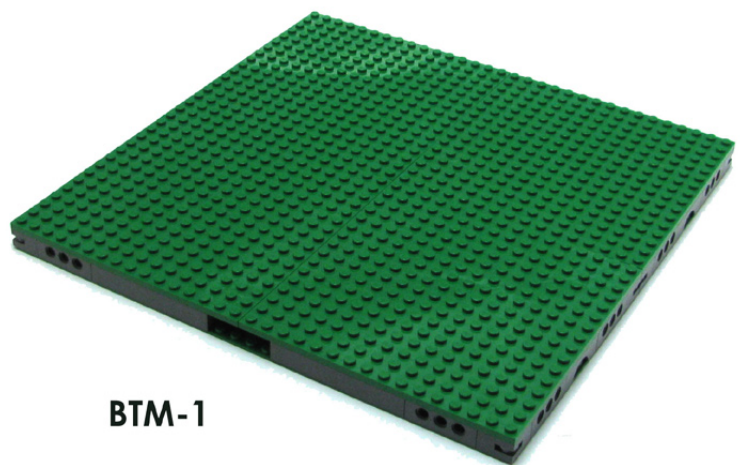
In this first instalment of the articles about MILS rules we will focus on defining the BTM module. All the other **MILS** modules will be reviewed in later articles that will appear in future issues of HispaBrick Magazine®.

The BTM module (Basic Terrain Module).

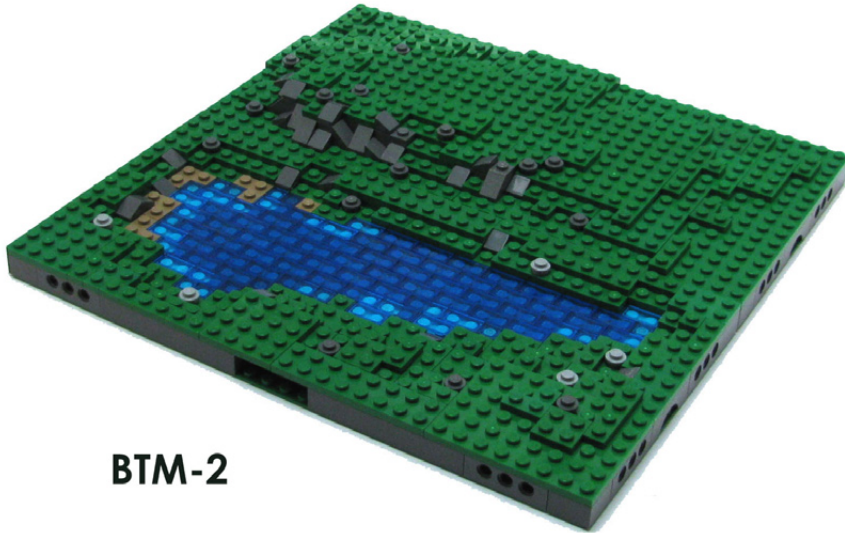
As has been commented above, the size of a BTM module is 32x32 studs and all its 4 sides are compatible with the **MILS** rules. The BTM is built on baseplates and has a height of 4 plates. To achieve the 32x32 studs size any combination of baseplates can be used, for example one 32x32 baseplate, two 16x32 baseplates or eight 16x8 baseplates. The 4 outer sides of the BTM can be made of any combination of bricks, but each corner is required to have 2 studs free on each side to put a piece, and next to this a 1x4 technic brick on either side. The rest of the side can be completed as the builder

wants. One of the reasons why this part is used in the corner is to identify the owner of the BTM, so its design and colours can identify the owner in a simple way. The technic bricks can be used to connect all the modules with adjacent MILS sides, to prevent shifting. The remaining elements of the side of a BTM module can be built as the builder wants. To cover all these parts it is recommended to use big plates, as that is the buildable surface of the BTM module. The height of a simple BTM is of one baseplate plus 4 plates, and this will be the reference height on the sides of the module. However **MILS** rules allow for any unevenness on a side that is within the range of one plate height. Hence, any element of the diorama that is positioned on just a baseplate may be raised to the height of the BTM simply by placing it over a group of pieces that have a height of 3 plates plus 1 tile.

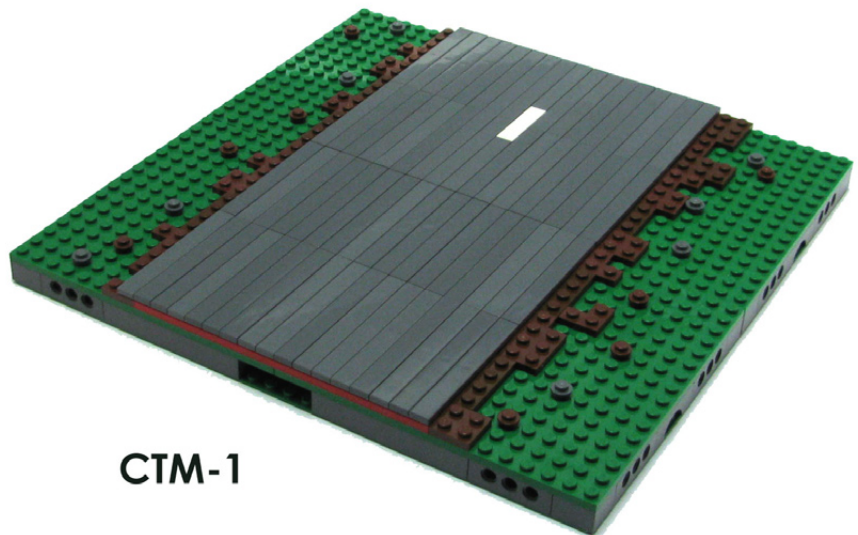
The BTM module is a very simple element without any kind of construction on its surface. It can be built with many features as any other module, but it has always to be kept in mind that a BTM module must be able to be oriented in any direction without affecting other adjacent modules. We assume that in the previous planning of any diorama the permanent elements of the terrain, like valleys, hills, rivers, roads, mountains, shore and so on will be taken into account. Other features such as trees, fences, minifigs, vegetation, etc. that can be added after



BTM-1



BTM-2



CTM-1

the planning are not considered part of the BTM. As was said before, any permanent feature built on the BTM module must be made in a way that it will never constrain the free orientation of the module or exceed the size of the module. For example, a stretch of river isn't suitable to be part of a BTM module, because the river needs some kind of continuity in both sides of the river extreme on each module. A BTM module can be as simple as a plain surface, built with plates. But it can also be a BTM with small lagoons, buildings, rocks, a trench or whatever that can fit on a 32x32 surface.

As you can see, a BTM can be used as joining elements between modules or elements of different builders, but another of the important functions of BTM modules is to provide builders of the diorama with some extra elements, in order to be used under exceptional circumstances to cover empty gaps or replace forgotten elements. Evidently BTM modules are not expected to be part of large features like mountains or cliffs,

those will be covered by the CTM modules. But they can be used to be placed in the gap between mountains, or to build great plains. The way to use a BTM in a diorama depends on the skill of the builder. A talented builder will be able to build a very nice BTM module and have a perfect compliance with the MILS rules at the same time. Although we are talking about "green" elements, everything stated before can be applied to desert terrains, arctic lands or city dioramas. Although a BTM may sound like a simple element and, apparently devoid of any construction, it can be as complicated as any other element. The only limitation is that it should be possible to place it in any of its four orientations without disrupting the continuity of the display.

With a few BTM modules we have a good starting point to move on to CTMs, but that is a matter for the next issue.
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