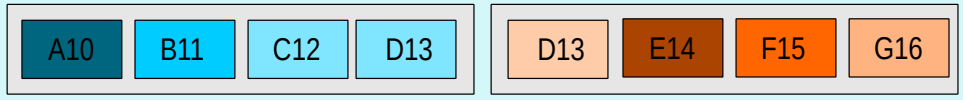
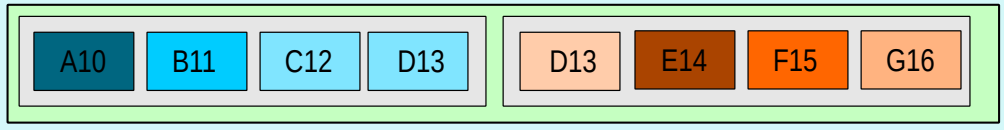
A

Cluster 1 Cluster 2



System 1 System 2



Solution 1

The 2 systems from the 2 models may belong to the same solution

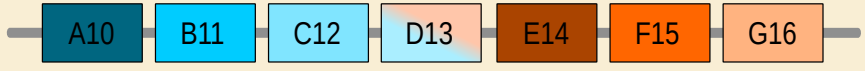
Model A Definition

```
<model min_mandatory_genes_required="2"
                          min_genes_required="4">
   <gene name="A" presence="mandatory"/>
   <gene name="B" presence="mandatory"/>
   <gene name="C" presence="mandatory"/>
   <gene name="D" presence="accessory"
                                multi_model="1"/>
</model>
```

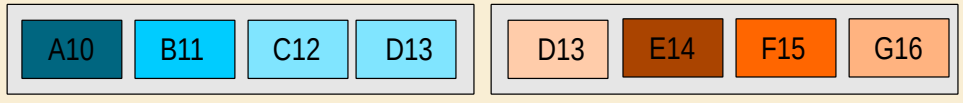
Model B Definition

```
<model min_mandatory_genes_required="1"
                          min_genes_required="4">
   <gene name="E" presence="mandatory"/>
   <gene name="F" presence="accessory"/>
   <gene name="G" presence="accessory"/>
   <gene name="D" presence="accessory"
                                multi_model="1"/>
</model>
```

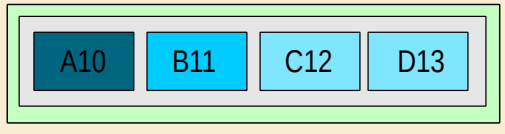
B



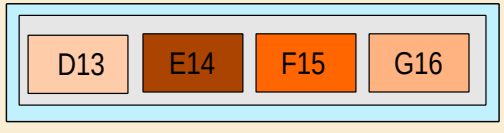
Cluster 1 Cluster 2



System 1 System 2



Solution 1



Solution 2

The 2 systems cannot coexist in a same solution, MacSyFinder will select the best one.

Model A Definition

```
<model min_mandatory_genes_required="2"
                          min_genes_required="4">
   <gene name="A" presence="mandatory"/>
   <gene name="B" presence="mandatory"/>
   <gene name="C" presence="mandatory"/>
   <gene name="D" presence="accessory"
                                multi_model="1"/>
</model>
```

Model B Definition

```
<model min_mandatory_genes_required="1"
                          min_genes_required="4">
   <gene name="E" presence="mandatory"/>
   <gene name="F" presence="accessory"/>
   <gene name="G" presence="accessory"/>
   <gene name="D" presence="accessory"/>
</model>
```