

Module Manager Types for Animation Purposes

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section *ModamTypesAnimate* **parents** *standard_toolkit*

This specification defines finite versions of the basic types used by the ModuleManager of MODAM, so that the specification can be more easily animated using the ZLive tool.

A Module uses the following types: (For animation purposes, we make these given types more concrete by defining them to be various integer ranges.)

ClassName == 8..19
ExtId == 20..29
DataId == 30..39
Path == 40..49
Contributor == 50..59
JavaType == 60..69

where *ClassName* is the set of all possible Java class names, *ExtId* is the set of all possible Eclipse extension point identifiers (for example, `au.edu.qut.modam.assetfactory`), *DataId* is the set of all possible Data identifiers (eg. `NetworkData`) – these are used to link providers and consumers together via named ports, *Path* is the set of all filesystem paths to input data files, *Contributor* is the identifier of a module, and *JavaType* is a set of all possible Java parameter.

MethodName == *DataId*

where *MethodName* can have any prefix to *DataId* and set as the same type.

An error for the data providers (this is a member of *ClassName*):

dataProviderError == 8

theorem *dataProviderErrorIsValid*
 $\vdash ?dataProviderError \in ClassName$

A concrete boolean type is defined (ZLive does not fully implement free types yet):

```
YES == 1  
NO == 0  
BOOLEAN == { YES, NO }
```

For animation purposes, the extension IDs and other specific values are also integer constants:

```
modamAssetFactory == 29  
modamBehavFactory == 28  
modamDataProvider == 27  
noDataId == 39  
noPath == 49  
nullClass == 9
```