

# IETF 93

draft-mansfield-uml-to-yang-00

# Summary

- The document provides guidelines for translating UML artifacts to YANG
- What is covered
  - Describes how to map the following UML artifacts to YANG
    - Object Classes
    - Attributes
    - Data Types
    - Associations
    - Interfaces
    - Operations
    - Parameters
    - Notifications
  - Impedance Mismatch
    - Where UML and YANG don't easily mesh (UML is Object-Oriented and YANG is Hierarchical)
    - Handling Recursion
    - UML Conditional Pacts
    - Rules like XOR

# Example Mapping Guidelines

Object Class --> "list" statement (key property) or "container" statement		
UML Artifact	YANG Artifact	Comment
documentation	"description" substatement	
superclass(es)	??	
abstract	abstract: "container" not abstract: "list"	
objectCreationNotification	??	
objectDeletionNotification	??	
support	"if-feature" substatement	
condition	"if-feature" substatement	
operation	"action" substatement	
XOR	"choice" substatement	
??	"config" substatement	

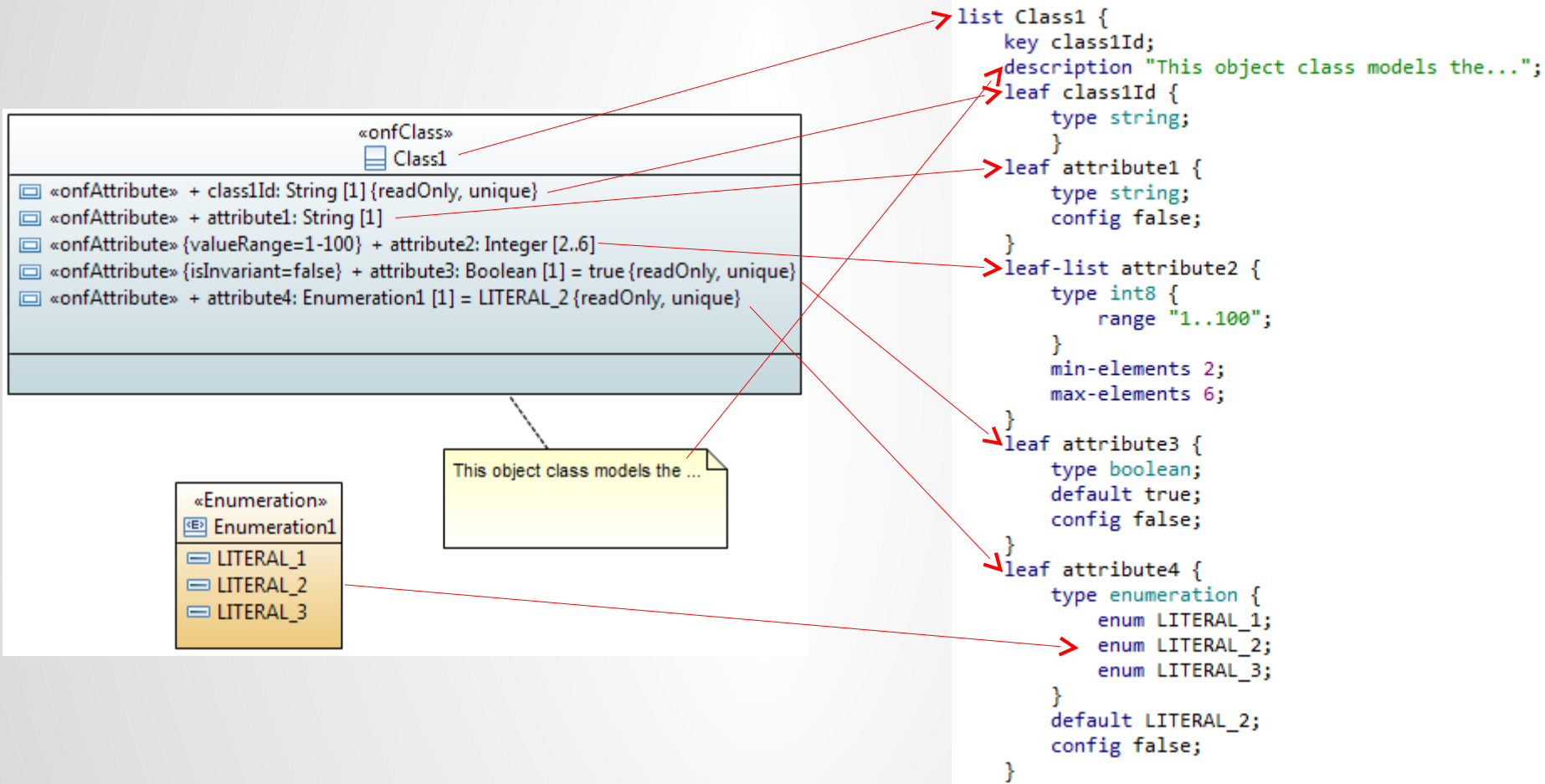
Partial listing of the Object Class mapping

Where there are “??” the authors are looking for support

In this example, an Object Class is mapped to a “list” or a “container”

Guidelines on when a list or containers used is also content to be added

# Example Mapping Guidelines



# Next Steps

- Seeking guidance from YANG experts
- Looking to resolve the question marks in the tables
- Looking to add guidance on when certain artifacts are used
- Aspire to be adopted as WG draft leading to an Informational RFC

# References

- IETF drafts
  - draft-lam:  
<https://tools.ietf.org/html/draft-lam-teas-usage-info-model-net-topology-01>
  - draft-mansfield:  
<https://datatracker.ietf.org/doc/draft-mansfield-netmod-uml-to-yang/>
- ONF Liaison (<https://datatracker.ietf.org/liaison/1406/>) re approval and public availability of:
  - [UML Modeling Guidelines 1.0](#) (March 2015 | TR-514)
  - [Papyrus Guidelines 1.0](#) (March 2015 | TR-515)