Introduction to Restcomm ASN Library

Abstract Syntax Notation One (ASN.1) is the standard for describing data structures in telecommunication and computer networking world. ASN.1 provides a set of formal rules for describing the structure of objects. The specification describes abstract objects that are independent of machine-specific encoding techniques.

ASN defined data can be encoded using one of these encoding rules:

- Basic Encoding Rules (BER)
- Canonical Encoding Rules (CER)
- Distinguished Encoding Rules (DER)
- XML Encoding Rules (XER)
- Packed Encoding Rules (PER)
- Generic String Encoding Rules (GSER)

ASN.1, together with specific ASN.1 encoding rules, facilitates the exchange of structured data between application programs over networks by describing data structures in a way that is independent of machine architecture and implementation language.

ASN encoded data looks logically as follows:

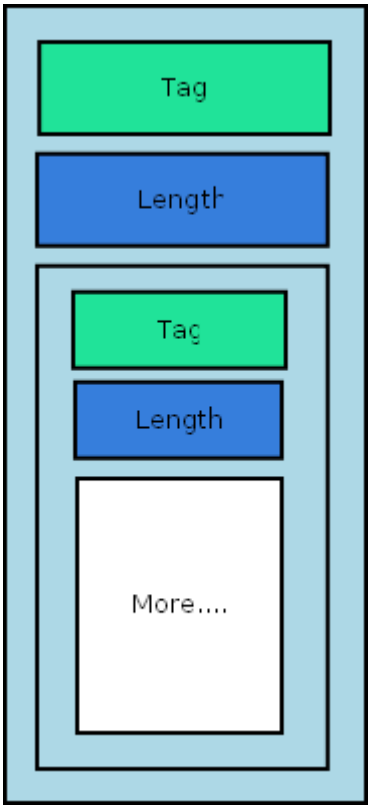

Figure 1. ASN encoding logical overview

Encoded data structure contains three elements:

Tag

Unique value, which identifies the type of data.

Length

Indicates the length of the current data structure.

Payload

Depending on the definition, this can be a simple value (like an integer), or it can carry another ASN encoded data structure.