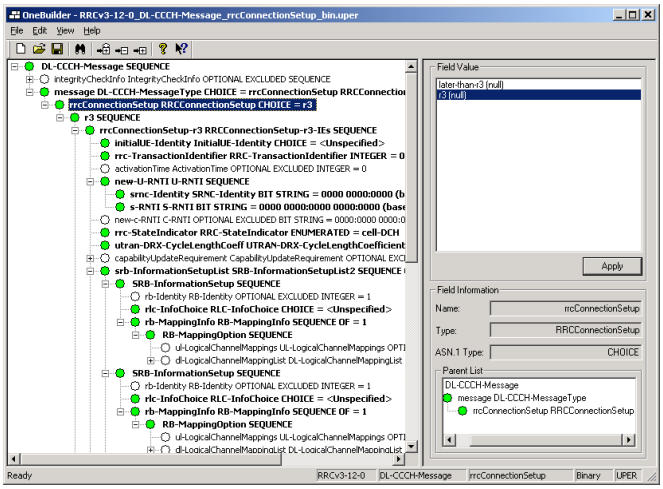
RED PACKET

OneBuilder

ASN.1 Messages Made Easy

ASN.1 Message Editor and Viewer



Features

- Build messages through an easy to use Graphical User Interface
- Decode messages into an easily readable form
- Encode and decode messages according to a custom ASN.1 syntax
- No programming required

Challenge

Abstract Syntax Notation One (ASN.1) is used to unambiguously describe complex messages to be exchanged between communicating systems.

Through ASN.1, system designers now have the ability to define message sets with a high degree of flexibility, functionality, and varying size.

The ability to use these systems is dependent on the creation of the appropriate message. In order to use and test these systems, many messages need to be created. Messages from several different ASN.1 syntaxes may also be involved. For the immature system where the ASN.1 syntax is changing frequently, messages will need to be recreated whenever new syntax definitions are released. Received messages also need to be examined and checked for correctness.

Problem

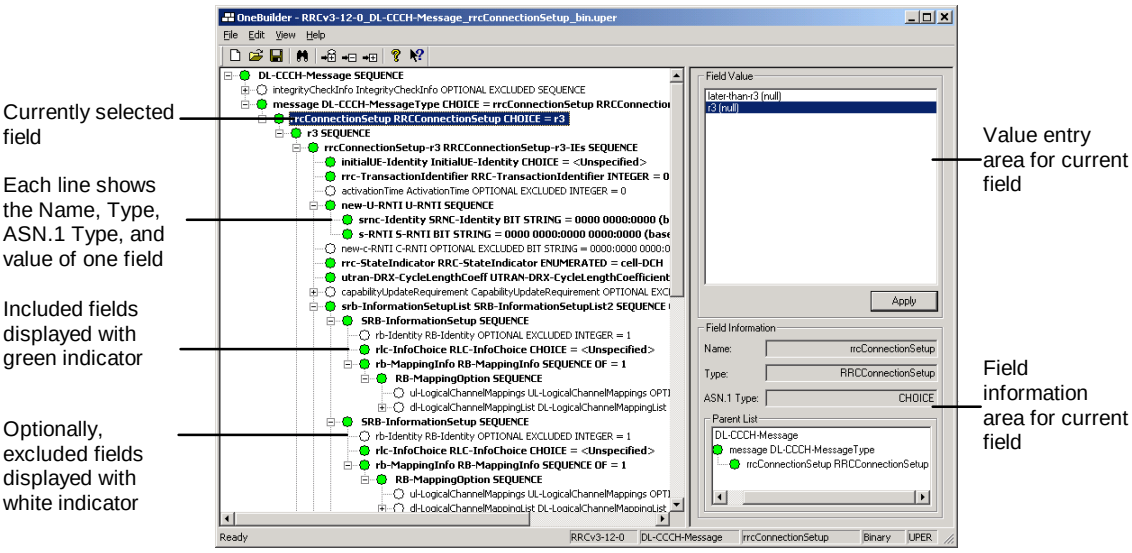
The current approach to resolving this challenge is far from ideal. It involves the purchase of an ASN.1 compiler and the subsequent generation of 'C' source and header files. These files are then included into a user-created program to build messages. This process is time consuming, complex, prone to error, and requires proficient software-engineering skills. It is a task not to be undertaken lightly. Ultimately these activities defocus the user from the primary task of using or validating the system.

Solution

For a simpler, easier, and lower cost solution, Red Packet Technologies has created OneBuilder. This tool allows you to quickly, and easily, start building messages according to any ASN.1 syntax. In a very short time you can use the graphical user interface to start building your messages

While eliminating the need to write programs, OneBuilder does not prevent you from using your own ASN.1 syntax. This is vital given the dynamic nature of some evolving ASN.1 syntaxes. OneBuilder provides an environment that can seamlessly cope with the changes.

In today's time-to-market driven world, every month or week saved in product development can mean the difference between success and failure.



Key Product Features

Easy to use

OneBuilder is operated through familiar Windows® user interface controls. No programming or training is required.

To create a new message, you select from a list of available ASN.1 syntaxes and then select from a list of available messages defined by the syntax. On initialization, all mandatory fields are automatically created. The overall message structure is displayed in a tree format with the currently included fields highlighted.

You can then select any field and modify its value. All available options are displayed. Optional fields can be included or excluded and the length of variable length fields specified.

Information on the field's name, range, and value are displayed. All data is checked for validated when entered. If an incorrect value is entered, immediate feedback is given.

For enumerated fields, all valid values are displayed in a drop down list.

Configurable

OneBuilder can operate using any ASN.1 syntax. You can define your own message syntax using ASN.1 and then use OneBuilder to create and view messages.
Red Packet Technologies will create a custom ASN.1 configuration file based on a valid ASN.1 syntax that you provide.

Input and Output

OneBuilder can save the created message in either binary or ASCII format. The data is encoded as the message is being saved. The file format used is simple and can easily be read by other applications. More detailed information is available on request.

Typical Applications

Applications involving ASN.1 include:

- 3GPP Layer 3 Protocols (NBAP, RRC, RANAP, RNSAP)
- Secure Electronic Transaction Protocol (SET)
- Z39.50 Information Retrieval Protocol and Wide Area Information Server (WAIS)
- H.225.0 Call signaling protocols and media stream packetization for packet-based multimedia communication systems

Applicable Standards

ITU-T X.680 through X.691

ISO/IEC 8824/8825

More Information

For more information, visit the company web site at http://redpackettech.com or contact info@redpackettech.com