MARBEN ASNSDK TCE

HIGH LEVEL PERFORMANCES ASN.1 TOOLS FOR C, C++ AND JAVA

Master the power of ASN.1

MARBEN ASNSDK SPEEDS UP THE DEVELOPMENT OF YOUR ASN.1 BASED APPLICATIONS REQUIRING PER, OER, BER, DER AND XER ENCODING/DECODING RULES.

EFFICIENT AND ROBUST SOLUTION – DESIGNED TO SATISFY HIGH LEVEL OF PERFORMANCES REQUIREMENTS

FAST / SMALL MEMORY FOOT PRINT

- The fastest ASN.1 encoder/decoder.
- Designed for embedded systems with high memory constraints.

MULTI-THREADS SAFE

- Our runtimes are fully re-entrant in order to run on multi-threads systems.

COST EFFECTIVE – SPEED UP YOUR DEVELOPMENTS AND REDUCE TIME TO MARKET.

EASY TO USE

- Reduces the development and integration time due to easy and user friendly APIs.
- Built for the novice who only needs generic simple functions as for the expert who needs to execute specific data processing.

EASY TO INTEGRATE

- Provides XML traces for an easy interpretation.
- XML built-in facilities to develop integration tests.

PLATFORM INDEPENDENT – BENEFIT FROM OUR LONG EXPERIENCE IN THE DESIGN OF PORTABLE SOFTWARE.

PORTABLE

- ASN.1 runtimes are provided in portable source code that can run on most operating systems and hardware.
- ASN.1 Java runtime is compatible with Java Runtime Environment J2ME CLDC to J2EE.

EASY CUSTOMIZATION

- Only one simple file allows you to customize the runtime.
- Use your own memory management.

TARGET APPLICATIONS

BTS, NodeB, Femtocell,
LTE Mobile phone application,
Roaming application, TAP3,
CDR parser, Billing
WiMax,
Automotive V2X, ITS (Intelligent Transportation System), eCall,
NGTP…

About Marben

A leading provider of key software solutions for next generation service-driven networks.

More than 30 years of experience

Delivers interoperable, robust and efficient signaling, routing and AAA solutions to accelerate the delivery of network services.

Marben Customers

Airbus, Be-Mobile, Bosch, Ciena, Cisco, Continental, CSG, Ericsson, ESA, Fujitsu, GMV, HP, Nokia, NEC, Oracle, Siemens, Sprint, Telstra, Valeo, Verizon, Volvo …

MARBEN ASNSDK TCE

TECHNICAL OVERVIEW

ASNSDK TCE encompasses an ASN.1 compiler, an ASN.1 to XML translator and a **PER** *(both aligned and unaligned variant)*, **OER**, **BER**, **DER** and **XER** *(both basic and canonical)* encoding/decoding engines providing ANSI **C**, **C++** or **Java** API.

ASN.1 COMPILER

The ASN.1 compiler conforms to ASN.1 standards. It takes as input the user ASN.1 description, performs syntax and semantic checks and produces, if needed, the corresponding error messages. It generates a C, C++ or Java API corresponding to the user ASN.1 description, used by the TCE runtimes to process ASN.1 data.

ASN.1 RUNTIMES

The TCE runtimes provide **encoding/decoding** services as well as permissive or strict **constraints check** and **traces** services. The user application has access to these services through the C, C++ or Java API generated by the ASN.1 compiler. The C, C++ or Java APIs are user-friendly. To each type of the input ASN.1 description, corresponds a C structure, a C++ or a Java class. To encode or decode a value, simply call the suitable method/function for PER, OER, BER, DER or XER rule. The TCE runtimes reduce the complexity of your application programs by being able to automatically encode or decode open type values.

TCE C and C++ are provided both with time optimized and memory optimized runtimes to best suit your needs. The user can easily switch from the time optimized to the memory optimized runtime without changing source code.

### GENERIC AND SAX-LIKE JAVA API

The TCE-Java runtimes also offer a Generic Java API to handle ASN.1 data in a generic way. The Generic Java API provides Java classes that are independent of the input ASN.1 description. The user has access to an ASN.1 value by providing the name of its ASN.1 type or the numeric identifier generated by the ASN.1 compiler. The SAX-like API works exactly like an XML SAX API. Each decoded ASN.1 piece of data is given back to the user in an XML format.

ASN.1 XML TRANSLATOR

Based on the input ASN.1 description, the ASN.1 compiler generates an XML Schema (XSD) that conforms to XER (XML Encoding Rules) together with a default XML Style sheet (XSL). Used in conjunction with the XER runtime, these features enable the user to encode/decode any XML values and to use the XSL to process ASN.1 values.

AN OPEN XML ARCHITECTURE

The ASNSDK compiler encompasses an XML Semantic Tree generator. This Semantic Tree represents in XML format, a synthesis of all the information contained in the input ASN.1 description. This feature enables users to develop their own ASN.1 solution (such as building generic decoding engines or ASN.1 to other formal notation gateways) based on an open XML architecture.
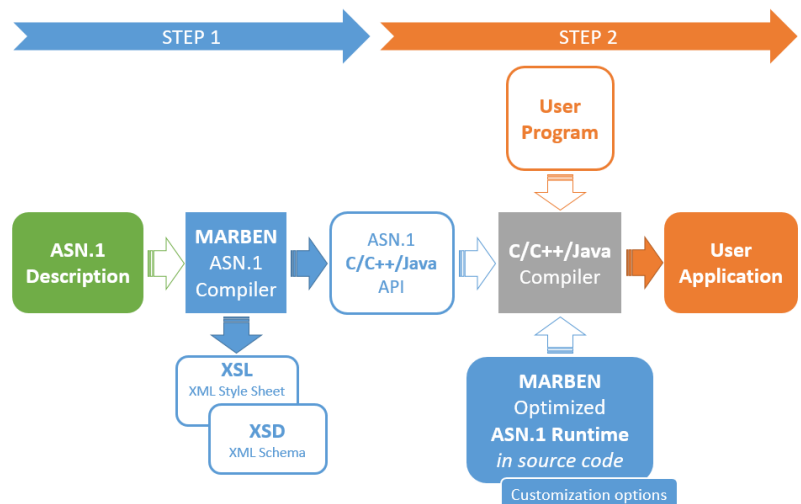
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CONFORMANCE

ITU-T X.680 - ISO/IEC 8824-1,
ITU-T X.681 - ISO/IEC 8824-2,
ITU-T X.682 - ISO/IEC 8824-3,
ITU-T X.683 - ISO/IEC 8824-4,
ITU-T X.690 - ISO/IEC 8825-1,
ITU-T X.691 - ISO/IEC 8825-2,
ITU-T X.693 - ISO/IEC 8825-4,
ITU-T X.696 - ISO/IEC 8825-7.

RELATED OFFERS

MARBEN ASN.1 Value Editor: A powerful and user friendly graphical tool that allows you to rapidly decode, create, edit, modify and encode any ASN.1 values without developing anything.

MARBEN CDR Converter: A command line tool that allows the conversion of any ASN.1 encoded file into a CSV or XML like text format.

MARBEN ASN.1 Consulting, Training and Custom Services.

SYSTEM REQUIREMENTS

TCE ASN.1 Compiler: PC Windows, PC Linux and UNIX platforms (Solaris, HP-UX).

TCE runtimes are delivered as portable source code.

TCE Java runtimes are compatible with all Java Runtime Environment from J2ME CLDC 1.0 up to J2EE.