

# ASN.1, 4G & XML Products

OSS Nokalva, Inc.

DELIVERING THE TECHNOLOGY YOU  
NEED TO CONNECT **THINGS**



## Just Clicks Away

With **ASN.1 Studio**, you literally need just a few mouse clicks to take any ASN.1 specification and actually run an application that encodes and decodes ASN.1 messages based upon it.

ASN.1 Studio can produce source code that demonstrates how to encode or decode any message whose type is defined in an ASN.1 specification. This generated demonstration source code can be copy-pasted into your application and the message sample fields can simply be replaced with the actual fields that a message should contain.

ASN.1 Studio can "export" its projects to a format that is understood by a target language compiler, linker or IDE, such as Microsoft Visual Studio. This further simplifies the process of building your ASN.1-based application.

## Technology at work for you

**OSS Nokalva®, Inc.** a privately held company located in Somerset, New Jersey, has been offering the highest quality standards-based software, support and services since 1988. OSS has been instrumental in shaping and developing **ASN.1, 4G, XML**, and biometric standards and standards-based solutions.

## Flexible solutions for your business needs

### OSS ASN.1 PRODUCTS

The **OSS ASN.1 Tools for C** is a powerful development toolkit for rapidly building applications using ASN.1, this product features a powerful ASN.1:2008 capable compiler, an intuitive IDE (**ASN.1 Studio™**), a run-time library with ASN.1 BER, CER, DER, PER, XER, CXER, and E-XER encoder/decoder engines that is the fastest on the market, and a rich collection of utilities to simplify and speed your development.

The **OSS ASN.1 Tools for C++** is the right choice if you use object oriented concepts in your application. The ASN.1/C++ compiler maps ASN.1 syntax into true C++ classes. The runtime libraries include C++ runtime classes to encode and decode application messages.

The **OSS ASN.1 Tools for Java** is a platform independent solution. The ASN.1/Java compiler maps ASN.1 syntax into Java classes. The runtime jar files facilitate encoding, decoding and various other operations on application messages.

The **OSS ASN.1 Tools for C#** is the solution for you If you would like to build an ASN.1 application in a .NET environment. The compiler maps ASN.1 syntax into C# classes, and the runtime DLL facilitates encode, decode, and various other operations on application messages.

**OSS Nokalva®**  
WWW.OSS.COM

OSS Nokalva, Inc.  
1 Executive Drive, Suite 450  
Somerset, New Jersey 08873 USA

Toll Free 888-OSS-ASN1 (US/Canada)  
Int'l +1-732-302-9669

Email [info@oss.com](mailto:info@oss.com)

# ASN.1, 4G & XML Products

OSS Nokalva, Inc.

## Specialized Products

**ASN-1Step** offers our intuitive IDE, ASN.1 Studio for ASN.1 analysis and development. It is a powerful tool for working with ASN.1 messages in human readable format, featuring syntax checking, message validation, encoding and decoding, and much more.

**ASN.1->XSD** converts your ASN.1 specification into an XSD schema that can be used by XSD applications to exchange XML messages with ASN.1 applications.

**XSD->ASN.1** converts your XSD schema into equivalent ASN.1 specs. All XML documents conforming to the original XSD would be valid XML encodings of the generated ASN.1.

The **PER Analyzer** add-on tool is highly recommended for protocol analysis and parsing PER (Packed Encoding Rule) messages at runtime. It provides detailed information about the PER encoding while allowing you to directly control the output format.

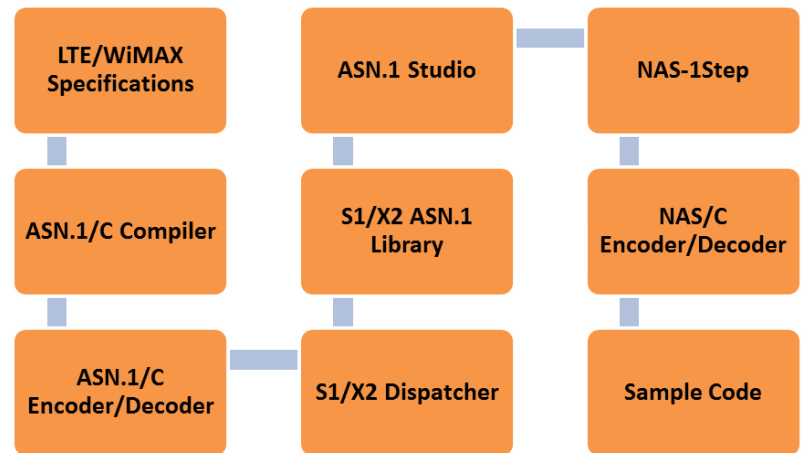
**Compile-And-Go-Library (CAGL)** is the best solution for dynamically compiling your ASN.1 specification at runtime – a perfect solution for CDR (Call Detail Record) processing applications. Use this runtime library to create, encode, and decode messages without having to rebuild your application.

**Lean Encoder/Decoder (LED)** is a great choice for deploying applications on resource constrained platforms such as embedded systems.

The **ECN Tools** eliminate the need for complex manual coding when trying to reuse legacy protocols, decrease bandwidth usage, reduce errors, or achieve other competitive advantages.

## OSS NOKALVA, INC.

1 Executive Drive  
Suite 450  
Somerset, New Jersey 08873 USA



**4G-Ready Tools** Get all you need to support 4G ASN.1 and NAS development, all in one place, and all from a company whose commitment to quality and service you know you can rely on.

## OSS 4G PRODUCTS

Building on our 20+ years of ASN.1 expertise and our high-performance PER encoder/decoder, OSS offers several 4G solutions – our 4G-Ready Tools, and our UE Protocol Stack. These 3GPP Release 8, 9, and 10 compliant products offer the same performance, reliability, and quality that companies worldwide know they can expect from OSS.

The **OSS 4G-Ready Tools** is a complete, powerful, yet easy to use 4G ASN.1 and NAS productivity kit that delivers everything you need to jump start your LTE and WiMAX development. This 4G kit includes: LTE and WiMAX specifications, the OSS ASN.1/C Tools including ASN.1 Studio, ASN.1 encoding/decoding samples, as well as an S1/X2 ASN.1 Library, an S1/X2 Dispatcher, S1/X2 API samples targeting LTE eNodeB development, NAS-1Step - a visual tool, and a NAS/C Encoder/Decoder Library. The 4G-Ready toolkit goes beyond support for low-level ASN.1 development by including several runtime libraries that ease your implementation of 3GPP LTE S1 and X2 protocols for eNodeBs/MMEs, as well as NAS protocols for UEs and eNodeBs.

The **LTE UE Protocol Stack** is a 3GPP Release 8 compliant implementation of Layer 2, Layer 3, and NAS, optimized for the memory, power, and performance requirements of user devices.

## OSS BINARY XML PRODUCTS

Now you can take advantage of two complementary, proven technologies – XML and binary encoding. OSS offers three Binary XML solutions: **XSD Tools**, **Fast Web Services Tools (FWS) Tools**, and **Fast Infoset (FI) Tools**. The OSS Binary XML products available for Java, C and C++, optimize your XML and Web Services applications, reducing the size related costs associated with the transmission, parsing, and serialization of XML documents. You achieve cost reduction without losing XML's many benefits