gSOAP toolkit fact sheet for version release 2.8.9 and up

- Intended for C and C++ (with optional use of STL containers)
- Client and server (HTTP/S Web server and SOAP/XML engine included)
- High-performance Web services (measured with 2.2KB XML messages over HTTP):
  - 3241 roundtrip calls per second on AMD FX-53 2.4GHz, 64-bit Linux 2.6.5
  - 2990 roundtrip calls per second on AMD Opteron 148 2.2GHz, 64-bit Linux 2.6.5
  - 2265 roundtrip calls per second on 2x Itanium2 1.4GHz, Linux 2.6.9 IA-64
  - 1936 roundtrip calls per second on Pentium4 3GHz (w/o HT), Linux 2.6.5
- Small footprint:
  - Only 73KB code and 2KB data for XMethods' delayed stock-quote C app on P4, Linux 2.6.5, gcc 3.3.3 -O1
  - Only 100KB code and 2KB data for Google API C app on P4, Linux 2.6.5, gcc 3.3.3 -O1
- Portable open-source C/C++ code, field-tested on the following platforms:
  - Windows Win32/Win64 (including NT, 2000, XP, Vista, Windows 7), MS-DOS (limited), and Cygwin
  - Linux (RedHat, SuSE, and any other "standard" Linux distro),
  - Unix (Solaris, HP-UX, FreeBSD, Irix, QNX, AIX, 64bit TRU64, and other)
  - Mac OS X (universal)
  - OpenVMS
  - Tandem NonStop (contact Genivia Inc to obtain bridge code for the Tandem NonStop)
  - Small and embedded OS (VxWorks, WinCE, Palm OS, Symbian).
- Testing and debugging:
  - Automatic echo test server code generation (soapcpp2 -T option)
  - Automatic request/response sample SOAP/XML message generation for testing
  - Automatic leak detection in debug mode
  - SOAP 1.1 and 1.2 messaging tested and validated against "soapbuilders Interoperability round 2 A to C"
  - Tested against eBay services, Amazon services, Google services, Wolfram services, Mappoint, and others
- Web service protocol compliance:
  - WS-I Basic Profile 1.0a, 1.1, and 1.2 compliant
  - Fully WSDL 1.1, SOAP 1.1, and 1.2 compliant
  - Full SOAP RPC encoding, SOAP rpc/literal and SOAP document/literal styles
  - Request-response, one-way, one-way asynchronous message exchanges
  - SOAP-over-UDP
  - C14N-exc
  - Interoperates with Axis (Java/C), PHP5, SOAP::Lite, SOAP4R, Weblogic, ZSI, and other
  - WCF with examples for basicHttpBinding, basicTransportSecurity, basicMessageSecurity, wsDualHttpBinding
- Other protocol support:
  - XML-RPC protocol in C and C++
  - JSON serialization in C++, allows dynamic switching between XML-RPC and JSON data formats
  - RSS 0.91, 0.92, and 2.0 protocols in C and C++
- SOAP attachments:
  - MIME (SwA)
  - DIME (streaming and non-streaming)
  - MTOM (streaming and non-streaming)
- WSDL 1.1 and XML schema specification support:
  - WS-I Basic Profile 1.0a, 1.1, and 1.2 compliant, WS-Policy 1.2 and WS-SecurityPolicy 1.2
  - WSDL to C and C++ source code generation
  - XML schema to C or C++ source code generation
  - C or C++ source code ("header file format") to WSDL and XML schema generation
- WS-* protocol support:
  - WS-Policy 1.2/1.5 and WS-SecurityPolicy 1.2
  - WS-Security (2004/01), provides authentication, signatures, and encryption)
  - WS-Addressing (2003/03, 2004/03, 2004/08, 2005/03)
  - WS-ReliableMessaging
  - WS-Discovery 1.0 and 1.1 (except compact signature format)
  - and others: user can translate WS-* protocols with the 'wsdl2h' translation tool
- UDDI v2
  - inquire API
  - publish API
- REST HTTP 1.0/1.1 and HTTPS support with OpenSSL or GNUTLS:
  - GET and POST (plugin support for PUT, HEAD etc)
  - Cookies, compression, chunking, keep-alive
  - NTLM authentication, HTTP Basic and digest authentication, MD5 checksum
  - SSL/TLS encryption and certificate authentication
  - SSL session caching
  - Proxy support and proxy authentication
- Networking support:
  - IPv4 and IPv6
  - TCP
  - UDP unicast and multicast
  - GSI (Grid Security Infrastructure through plugins)
  - Other network stream handlers are available as plug-ins
- Server module support:
  - Apache 1.x and 2.0 mod_gsoap
  - IIS (ISAPI) and WinInet
  - CGI and FastCGI
  - Stand-alone Web server (daemon)
- Architecture features:
  - Integrated memory management
  - Compiler-based XML serialization of native C and C++ data structures
  - Custom serializers and DOM support
  - Plug-in architecture supports extensions (message logging, statistics, etc.)
  - Internationalization/localization (UTF8-encoded UCS4 unicode, MB strings)
  - Extensive documentation and numerous examples included