



M5T SigComp SAFE

M5T SigComp SAFE is a C++ implementation of RFC 3320 - "**Signaling Compression**" and RFC 3321 - "**Signaling Compression (SigComp) - Extended Operations**".

Since SIP is a text-based protocol; it was not originally designed to optimize the size of a message. With the advent of low-rate IP connectivity such as through cellular networks and with the adoption of SIP by 3GPP and 3GPP2 working groups, a solution is needed to ensure the speed and efficiency of call setup and feature invocation.

This software product is well suited to be used within 3GPP server application (IMS), 3GPP handset, to implement OMA PoC v1.0 specification and to develop dual-mode mobile phones for Fixed and Mobile Convergence along with the M5T SIP-UA SAFE product or with any other SIP stack.



KEY FEATURES

- **Compression Algorithm:** DEFLATE algorithm comes as part of the M5T SigComp SAFE and other compression algorithm can be supported if required.
- **SigComp - Extended Operations:** M5T SigComp SAFE implements dynamic compression that helps to achieve better compression ratio.
- **Efficient Resource Usage:** M5T SigComp SAFE has been optimized to be integrated within devices where resources are very limited. Most of the time, mobile handsets have different types of RAM (fast and slower). Thus, the critical part M5T SigComp SAFE can be easily run in fast memory to respect 3GPP TR23.979 specification requirements while at the same time keeping mobile handset BOM as low as possible. Conclusion: « Retrofit » can be possible.
- **Fast Integration with any SIP stack:** M5T design its software products with a components approach. Consequently, integration with your actual SIP stack is done seamlessly. When used with M5T SIP-UA SAFE product, integration is given as part of the service architecture.
- **Easy Portability:** The key differentiator of M5T software products architecture. M5T SigComp SAFE relies on the M5T Framework SAFE that hides all the portability complexity. Thus, it is very easy to port to any operating system even proprietary ones, something that we often see in mobile handset.
- **Simple API:** Defines a few interfaces representing specific responsibilities, each regrouping simple access and control methods. Each interface has a minimal set of methods and SigComp handles some protocol details automatically to ease its integration.

Supported Standards	References
• Signaling Compression (SigComp)	RFC 3320
• SigComp – Extended Operations	RFC 3321
• SIP and SDP Static Dictionary for SigComp	RFC 3485
• SigComp Torture tests are part of the regression test suite of M5T SigComp.	Draft-ietf-rohc-sigcomp-torture-tests
• DEFLATE Compressed Data Format Specification version 1.3	RFC 1950
• 3GPP Technical Specification Group Services and System Aspects; 3GPP enablers for OMA; Push-to-talk over Cellular (PoC) services.	TR 23.979

Requirements

M5T SigComp SAFE requires the following:

- ANSI C++ Compiler with support of templates, placement new and placement delete operators, and support of the "mutable" keyword.
- Operating system with mutexes, semaphores, or other synchronization objects (if concurrent access is required).

M5T SigComp SAFE is already ported to the following operating systems:

- Linux
- VxWorks
- Nucleus
- Windows
- Windows Mobile

Additional operating systems can easily be supported, provided the above requirements are met.

Deliverables

- Full source code of M5T SigComp SAFE and of M5T Framework SAFE;
- M5T SigComp SAFE programmer's guide, with key concept description;
- M5T SigComp SAFE API references guide;
- M5T Framework SAFE programmer's guide, with key concept description;
- M5T Framework SAFE API references guide;
- Detailed release notes cumulating all changes done in each software release.



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