

Signaling compression

Application signaling over cellular links

<draft-hannu-rohc-signaling-cellular-01.txt>

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Outline

- **Why Signaling Compression?**
- **Protocols**
- **Why ROHC?**
- **Requirements**
- **ROGER**
- **Proposed way forward**

Why Signaling Compression?

- **Reduce bandwidth needs**
 - **Save capacity when running IP on wireless links**
- **Improved Service Quality**
 - **Decrease user idle time**
 - **Session setup time**
 - **Control time**

Protocols

- **ASCII based**
 - **Generous in size to provide the necessary information**
 - **Very flexible and extensible**
- **Request and reply characteristics**
- **Examples**
 - **SIP**
 - **SDP**
 - **RTSP**

Why ROHC?

- **ROHC framework**
 - Accepted
 - Provides mechanisms to initiate compression
 - Rather easy to extend with new functionality
 - Profile concept
- **Link perspective**
 - Compression is done where it is needed

Requirements

- **General**
 - **Transparent compression**
 - **Co-exist with the ROHC framework (new profile)**
 - **Operate under all expected link conditions**
 - **Able to handle multiple types of protocol messages**
 - ...
- **Performance requirements**
 - **Error propagation must be minimized**
 - **The scheme must no significantly contribute to system delay budget**
 - **The scheme should not noticeably add to the end-to-end delay**
 -

ROGER

RObust GEneric message size Reduction

<draft-hannu-rohc-roger-00.txt>

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Intellectual property rights considerations

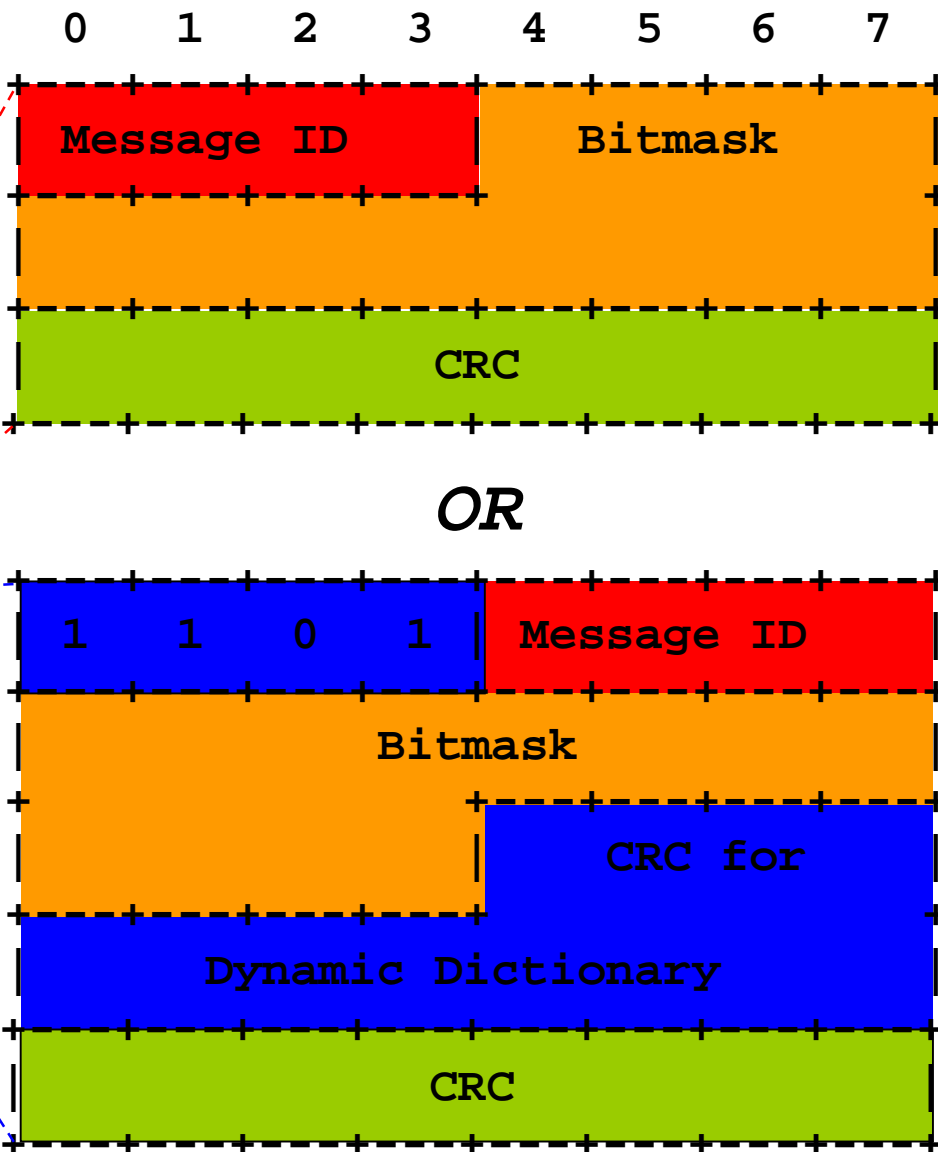
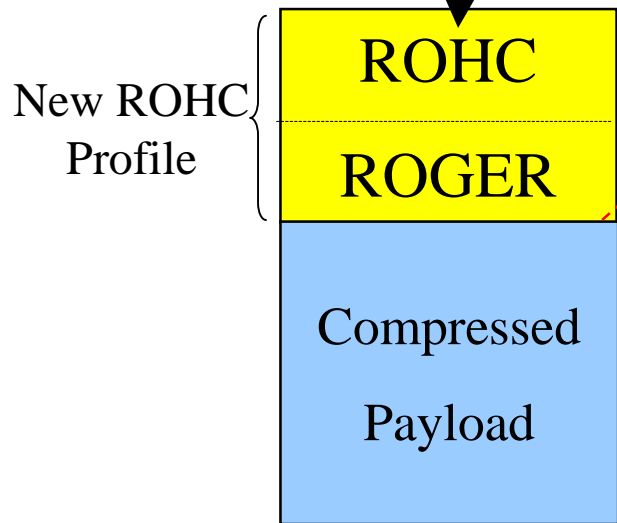
Ericsson has filed patent applications that might possibly have technical relations to this contribution.

[Http://www.ietf.org/ietf/IPR/ERICSSON-General](http://www.ietf.org/ietf/IPR/ERICSSON-General)

Description

- **Profile in ROHC Framework**
- **Basis is a binary compression method**
 - Dictionary method
- **Mechanisms are added to improve the compression efficiency**
 - Previous messages are used in the compression process
- **Robust against packet losses**
 - A sent message is not used for compression until it is certain that the message has been received by the decompressor
- **Three modes of implementation**
 - Depends on the communication possibilities between compressor and decompressor at each entity

The same functions as the current IP/UDP profile, or the future IP/TCP



Open issues / ideas

- **Binary compression algorithm**
 - **Time to keep dictionaries at the entities**
 - **Update of Dynamic Dictionary**
 - **Efficiency**
 - **Usage of the “CRC for Dynamic Dictionary”**
-
- **User specific Semi-Static dictionary**

Proposed way forward

- **Make signaling compression a ROHC WG item**
- **Start with a requirements document for signaling compression**
 - **First version ready by the end of April**
 - **Stable version before IETF 51st, London**