

Robust Header Compression (rohc)

Chairs:

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Hello! This is an IETF Working Group

- ◆ We are here to make the Internet work (Fred Baker)
- ◆ Rough Consensus and Running Code (Dave Clark)
- ◆ Working Group is controlled by
 - ▲ IETF Process (RFC2026) – *read it!*
 - ▲ Area Directors (ADs): Alison Mankin, Scott Bradner
 - ▲ Charter (<http://www.ietf.org/html.charters/rohc-charter.html>) -- *read it!*
 - ▲ Working Group Chairs: Mikael Degermark, Carsten Bormann
 - ▲ Technical Advisor: Erik Nordmark
- ◆ Work is done on email list rohc@cdt.luth.se
 - ▲ And on IETF meetings, interim meetings, informal meetings, ...
 - ▲ Mailing list is official channel, though

RFC 2026: Internet Standards Process

- ◆ **Standards track RFCs:**
 - ▲ **WG consensus (as judged by WG chairs)**
 - ▲ **WG last call**
 - ▲ **IESG approval (based on AD recommendation)**
 - ▲ **Quality control!**
 - ▲ **IETF last call**
- ◆ **Informational RFCs**
- ◆ **BCP (best current practice) RFCs**

RFC 2026: IPR issues (1)

- ◆ **(10.2) No contribution that is subject to any requirement of confidentiality or any restriction on its dissemination may be considered [...]**
- ◆ **Where the IESG knows of rights or claimed rights [...] the IETF Executive Director shall attempt to obtain from the claimant [...] a written assurance that upon approval by the IESG of the relevant Internet standards track specification(s), any party will be able to obtain the right to implement, use and distribute the technology [...] based upon the specific specification(s) under **openly specified, reasonable, non-discriminatory** terms.**

RFC 2026: IPR issues (2)

- ◆ **Contributions (10.3.1(6)):**

“The contributor represents that he has disclosed the existence of any proprietary or intellectual property rights in the contribution that are reasonably and personally known to the contributor.”

- ◆ **I.e., if you know of a patent application for a technology you are contributing, you have to tell.
Or just shut up entirely!**

IPR issues: ROHC WG policy

- ◆ **For expedience:**
 - ◆ **Include IPR statements in the contributions (I-Ds, slides)**
 - ▲ Upon advancement to RFC, these IPR statements will be replaced by a pointer to <http://www.ietf.org/ipr>
- ◆ **Unencumbered technologies facilitate interoperability and are therefore generally preferable**
 - ▲ Of two roughly equal proposals, select the unencumbered one
 - ▲ Desirable: *Default* configuration is unencumbered

ROHC: Charter (1)

- ◆ **Cellular links: expensive, limited bandwidth**
- ◆ **IP/UDP/RTP and IP/TCP packets benefit considerably from header compression**
- ◆ **Existing schemes (RFC 1144, RFC 2508)**
 - ▲ **do not perform well over cellular:
high error rates and long link roundtrip times**
 - ▲ **do not compress TCP options such as SACK or Timestamps**
- ◆ **Goal of ROHC:**
 - ▲ **develop header compression schemes that perform well over links with high error rates and long roundtrip times.**
 - ▲ ***must* perform well for cellular links built using technologies such as WCDMA, EDGE, and CDMA-2000.**
 - ▲ ***should* also be applicable to other future link technologies with high loss and long roundtrip times**
 - ▲ ***Ideally*, it should be possible to compress over unidirectional links.**

ROHC: Charter (2)

- ◆ **Good performance:**
 - ▲ minimal loss propagation
 - ▲ minimal added delay

And, of course, the size...
- ◆ **Target:**
 - ▲ generic TCP and UDP/RTP compression
 - ▲ applications of particular interest: voice and low-bandwidth video
- ◆ **ROHC may develop multiple compression schemes**
 - ▲ e.g., for specific link layer technologies
 - ▲ additional schemes may be added in consultation with the ADs.
- ◆ **Must:**
 - ▲ assure that when a header is compressed and then decompressed, the result is semantically identical to the original;
 - ▲ perform well when end-to-end path involves more than one cellular link;
 - ▲ support IPv4 and IPv6.

ROHC: Charter (3)

- ◆ **First task: Create more thorough requirements documents**
- ◆ **Maintain connections with other standardization organizations developing cellular technology for IP, such as 3GPP and 3GPP-2**
 - ▲ **ensure that output fulfills their requirements and will be put to good use**
- ◆ **Develop a solid understanding of the impact that specific error patterns have on HC schemes, and document guidelines to L2 designers regarding what L2 features work best to assist L3/L4 HC**
- ◆ **Address interactions with IPSEC and other security implications.**

- ◆ **Remember: Only IESG can change the charter!**

ROHC: Charter (4) Goals and Milestones

- ◆ **Mar: I-D on Requirements for IP/UDP/RTP HC.**
- ◆ **May: I-D of layer-2 design guidelines.**
- ◆ **May: I-D(s) proposing IP/UDP/RTP HC schemes.**
- ◆ **May: I-D of Requirements for IP/TCP HC.**
- ◆ **Jun: Requirements for IP/UDP/RTP HC submitted to IESG (Inf.)**
- ◆ **Jul: Requirements for IP/TCP HC submitted to IESG (Inf.)**
- ◆ **Jul: Resolve possibly multiple IP/UDP/RTP HC schemes into a single scheme.**
- ◆ **Aug: I-D on IP/TCP header compression scheme.**
- ◆ **Sep: Layer-2 design guidelines submitted to IESG (Inf.)**
- ◆ **Sep: IP/UDP/RTP HC scheme submitted to IESG (PS)**
- ◆ **Dec: IP/TCP HC scheme submitted to IESG (PS)**
- ◆ **Jan: Possible recharter of WG to develop additional HC schemes.**

ROHC: Charter (5) Goals and Milestones

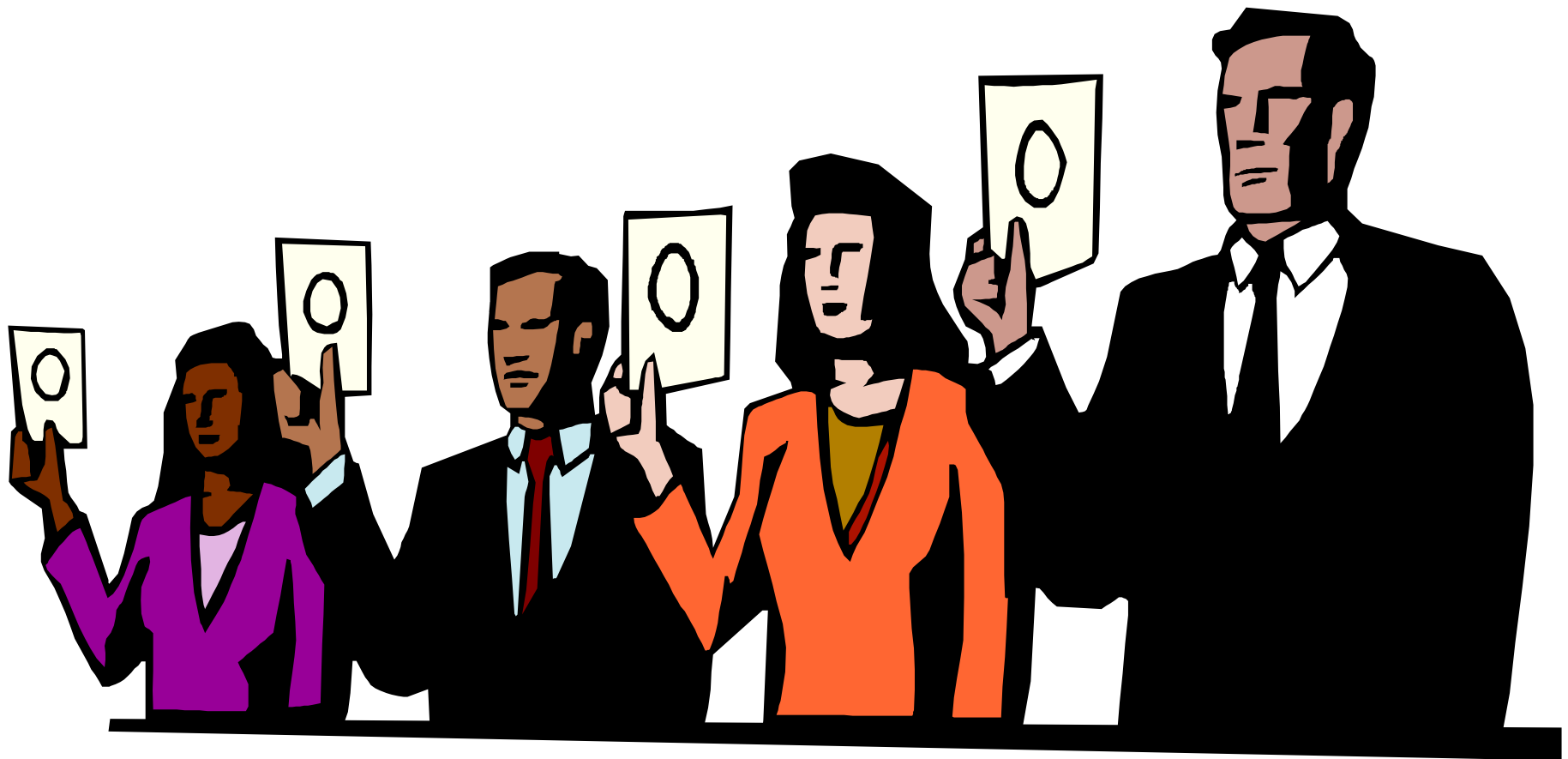
- ◆ **Other standards bodies trust us to meet these timelines!**
 - ▲ **Keep focus on our charter**
 - ▲ **Stick to technologies that can be made to work now**
 - ▲ **Explore complete general solution space later**
- ◆ **But stick to quality thinking, too!**
 - ▲ **IESG won't accept a shoddy solution**
 - ▲ **1 byte = \$1,000,000,000**
 - ▲ **Lack of forward thinking may be even more expensive**

Liaisons

- ◆ **Liaisons should be people working in both bodies**
- ◆ **3GPP: Proposal: Krister Svanbro**
- ◆ **3GPP2: (your name here)**
- ◆ **Other?**

Agenda

- ◆ 09:00 Chair admonishments
- ◆ 09:20 Agenda bashing
- ◆ 09:25 Header compression requirements draft (Degermark)
→ draft-ietf-rohc-rtp-reqs-00 (try to stabilize now)
- ◆ 09:45 draft-svanbro-rohc-lower-layer-guidelines-00.txt
- ◆ 10:00 draft-jonsson-robust-hc-04.txt,
draft-martensson-rocco-video-00.txt (Jonsson)
- ◆ 10:25 draft-ace-robust-hc-01.txt (Clanton?)
- ◆ 10:45 draft-miyazaki-rohc-kwhc-00.txt (Burmeister)
- ◆ 11:00 draft-koren-avt-crtp-enhance-01.txt
- ◆ 11:15 Where do we go from here?
- ◆ 11:30 Towards ROHC requirements for TCP (Degermark)
- ◆ 11:3a (close)



Interim Meeting?

- ◆ **Week commencing May 29**
 - ▲ There seems to be no ETSI, 3GPP or 3GPP-2 meeting there
 - ▲ Proposed Venue: Nokia Stockholm?
- ◆ **Agenda:**
 - ▲ Finishing Touches to RTP Requirements
 - ▲ Initial WG round on TCP Requirements
 - ▲ Updates to L2 Guidelines based on RTP Scheme work
 - ▲ Breakthrough on Convergence on RTP Scheme (hopefully...)