COSE "typ" (type) Header Parameter

draft-ietf-cose-typ-header-parameter

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What Does It Do?

- Adds the “typ” (type) COSE Protected Header
  - Enables typing the entire COSE object using registered
    - CoAP Content-Format numbers or
    - Media Types and Media Type Parameters

- Background: While COSE included “content type” paralleling the JOSE “cty”, it failed to include the equivalent of “typ”
Why Do It?

- Enable explicit typing, in parallel with the JWT BCP [RFC 8725]
- Distinguishing between “whole COSE object” and “payload” content types
Status

- Review feedback incorporated after IETF 117 in San Francisco
- Then adopted by the working group
- Now being recommended by draft-ietf-cose-cwt-claims-in-headers
  - Based on feedback from Carsten Bormann
- Added language describing use of Entity Type parameters
  - Also based on feedback from Carsten Bormann
- -01 just published incorporating this feedback
  - No breaking changes
- No other feedback received since WG adoption
Next Steps

- Time for Working Group Last Call?
Backup Slides
Why not just use CBOR tags?

- CBOR tags prefix the COSE structure and are not part of it
  - Therefore, they’re not integrity-protected and might be omitted
- “typ” (typ) parallels COSE “content type” and JOSE “typ”
  - Uses CoAP Content-Formats numbers and Media Type strings
Application Examples (SCITT Receipt & W3C Verifiable Credentials)

# COSE_Sign1
18([

# Protected Header
h'a2012...43833633531',
# {
#   "alg" : "ES256",
#   1 : 7,
#   "typ" : "application/receipt+cose",
#   TBD (requested 15) : h'a2012...43833633531',
#   ... additional application specific headers ...
# }]

# Unprotected Header
{
    ....
},

# Protected Payload
...

# Signature
h'486...7f77ea'
])