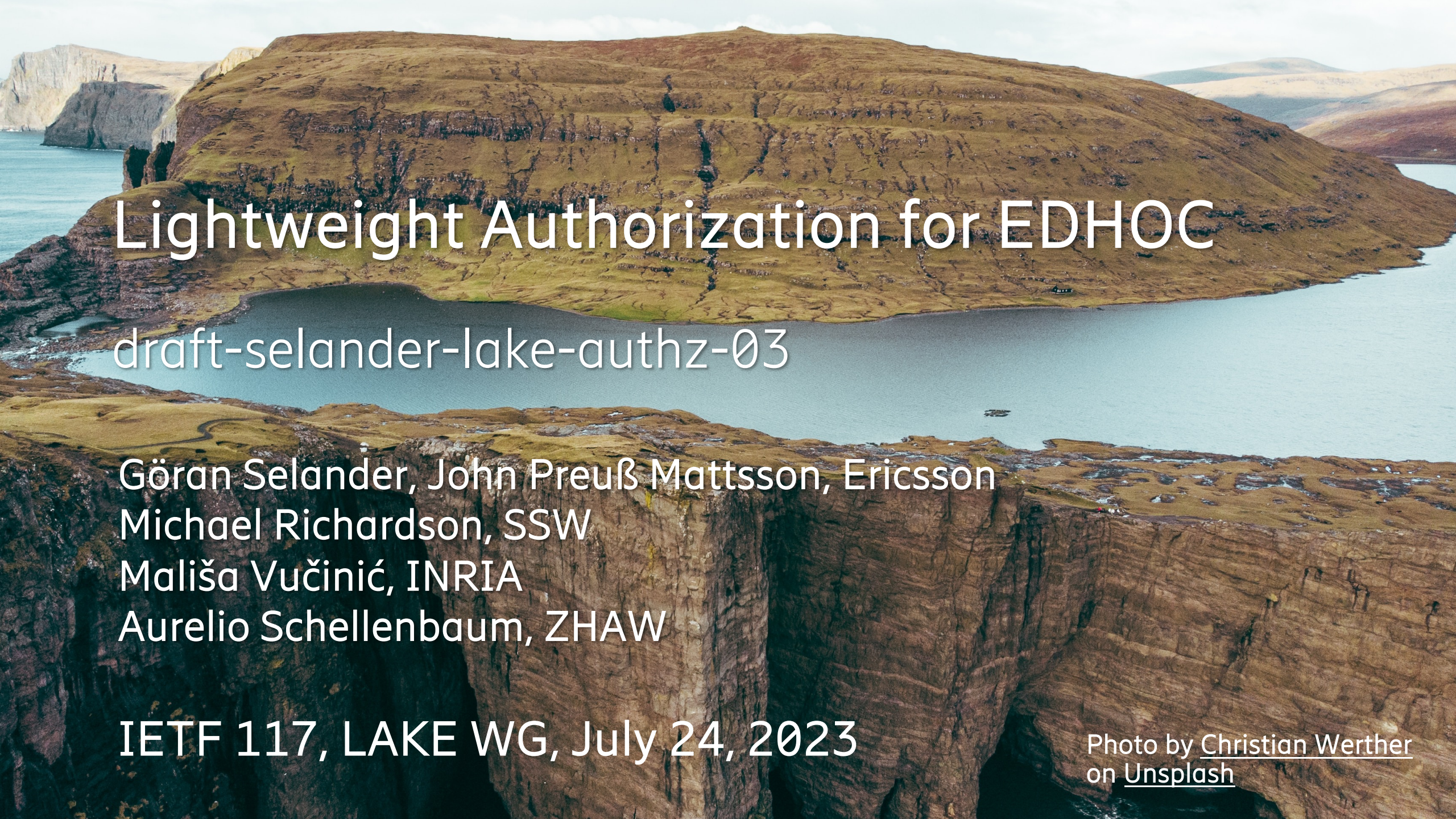

Lightweight Authorization for EDHOC

draft-selander-lake-authz-03

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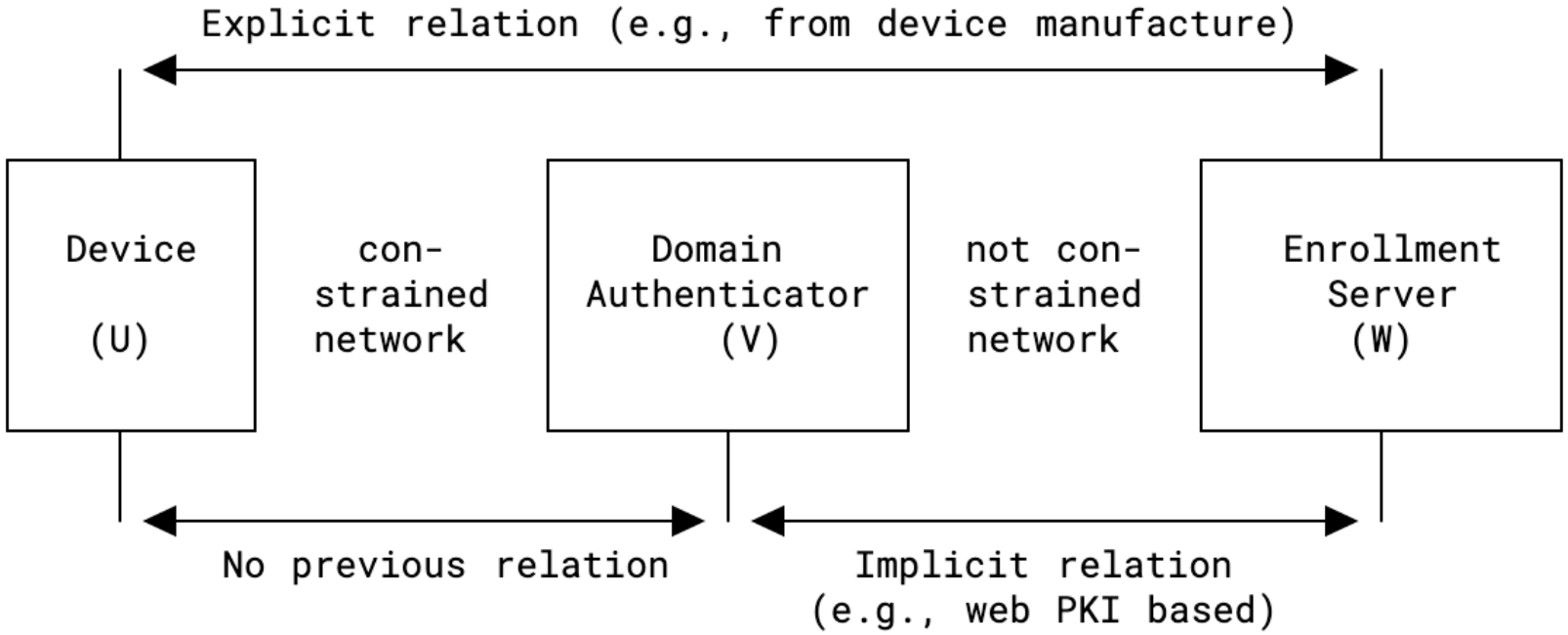
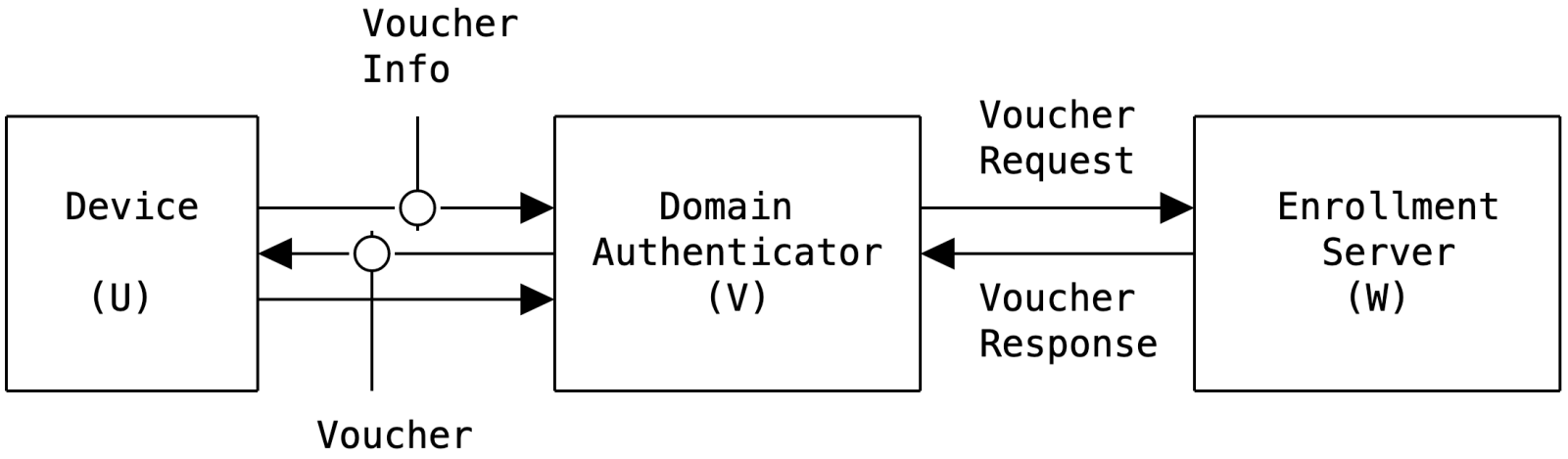
Recap



- The **Device (U)** wants to enroll into a domain over a constrained link
- The Device and **Domain Authenticator (V)** mutually authenticates and authorizes each other
- The procedure is assisted by an **Enrollment Server (W)** located in a non-constrained network
  - Change name from “Authorization Server” to disambiguate with ACE
  - Maps to BRSKI MASA

Core Protocol Overview



- U and V authenticates using EDHOC
- Authorization related information passed U → V → W → V → U
  - Between U and V in EAD fields of EDHOC (Voucher Info/Voucher)
  - Between V and W in REST exchange (Voucher Request/Voucher Response)

NOTE: Voucher much smaller than RFC 8366

State of -03

- Updated core protocol
  - Separated V ←→W security establishment, and proof-of-possession w.r.t. CRED_V
    - Not needed for every U←→V connection
    - Allows reuse of EDHOC for PoP
  - Simplified protocol
    - Essentially forwarding of message_1 and Voucher
  - Enabled stateless operation of V during VREQ/VRES exchange

- Detailed REST interface at W
  - https/coaps/coap with OSCORE
  - Media type registration

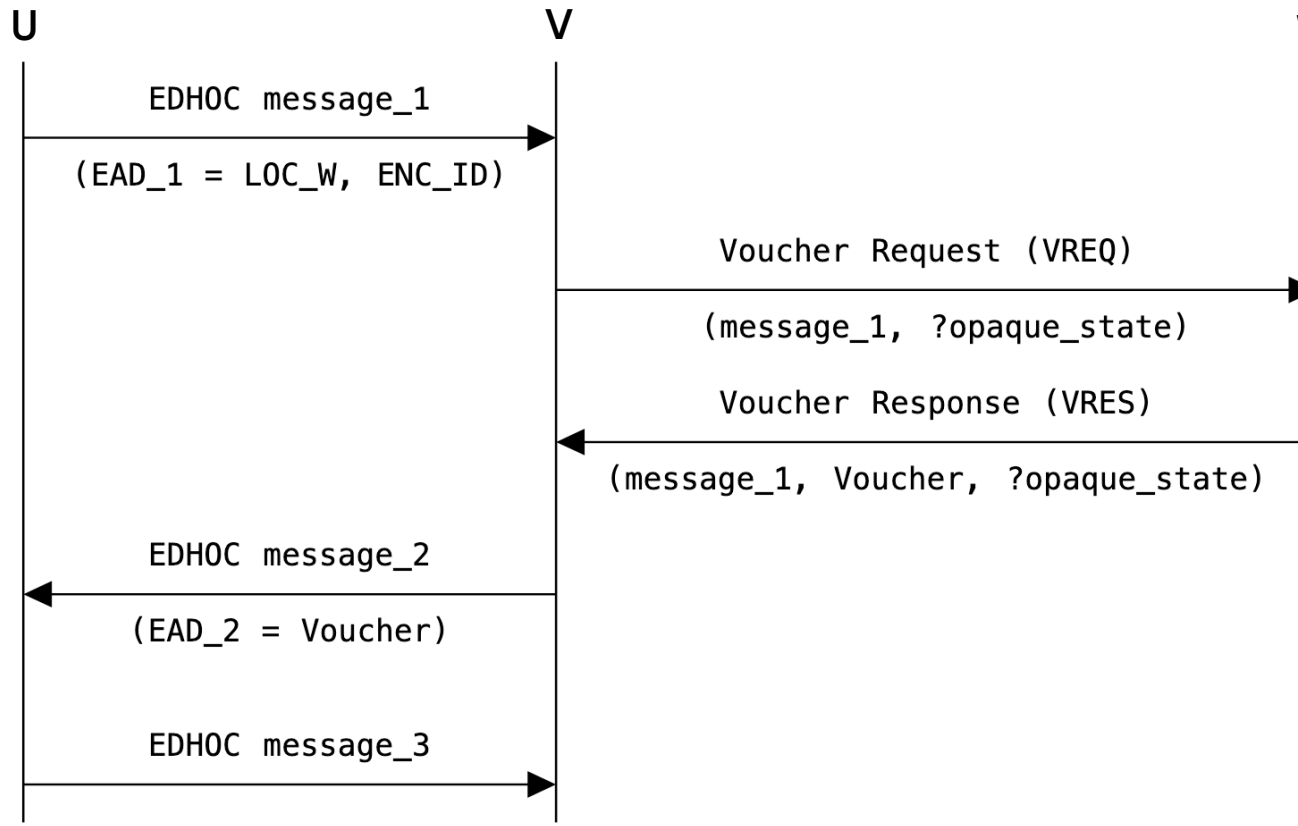
- Aligned with edhoc-20

Core Protocol

Before VREQ/VRES:

- Secure channel between V and W
- V proves to W the possession of CRED_V private key

- LOC_W = URI or domain of W
- ENC_ID = Device ID encrypted for W



- VREQ sent over the secure channel
- W decrypts Device ID
- Voucher = MAC (h(message_1), CRED_V)

- U verifies Voucher
- ID_CRED_I in message_3 may reference CRED_U

After message_3: V looks up CRED_U (optional)

Next steps

- Appendix on scaling considerations for V
- Implementation and interop testing

- Next step
  - Review
  - Ready for adoption?