



draft-ietf-schc-over-networks-prone-to-disruptions-00

Edgar Ramos <edgar.ramos@ericsson.com>

Lorenzo Corneo <lorenzo.corneo@ericsson.com>

Ana Minaburo <anaminaburo@gmail.com>

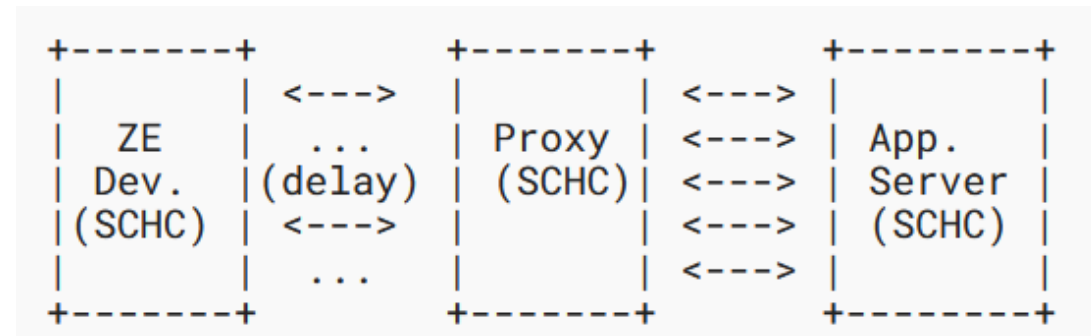
Rodrigo Munoz <rmunozlara@ing.uchile.cl>

Sandra Cespedes <sandra.cespedes@concordia.ca>

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Status

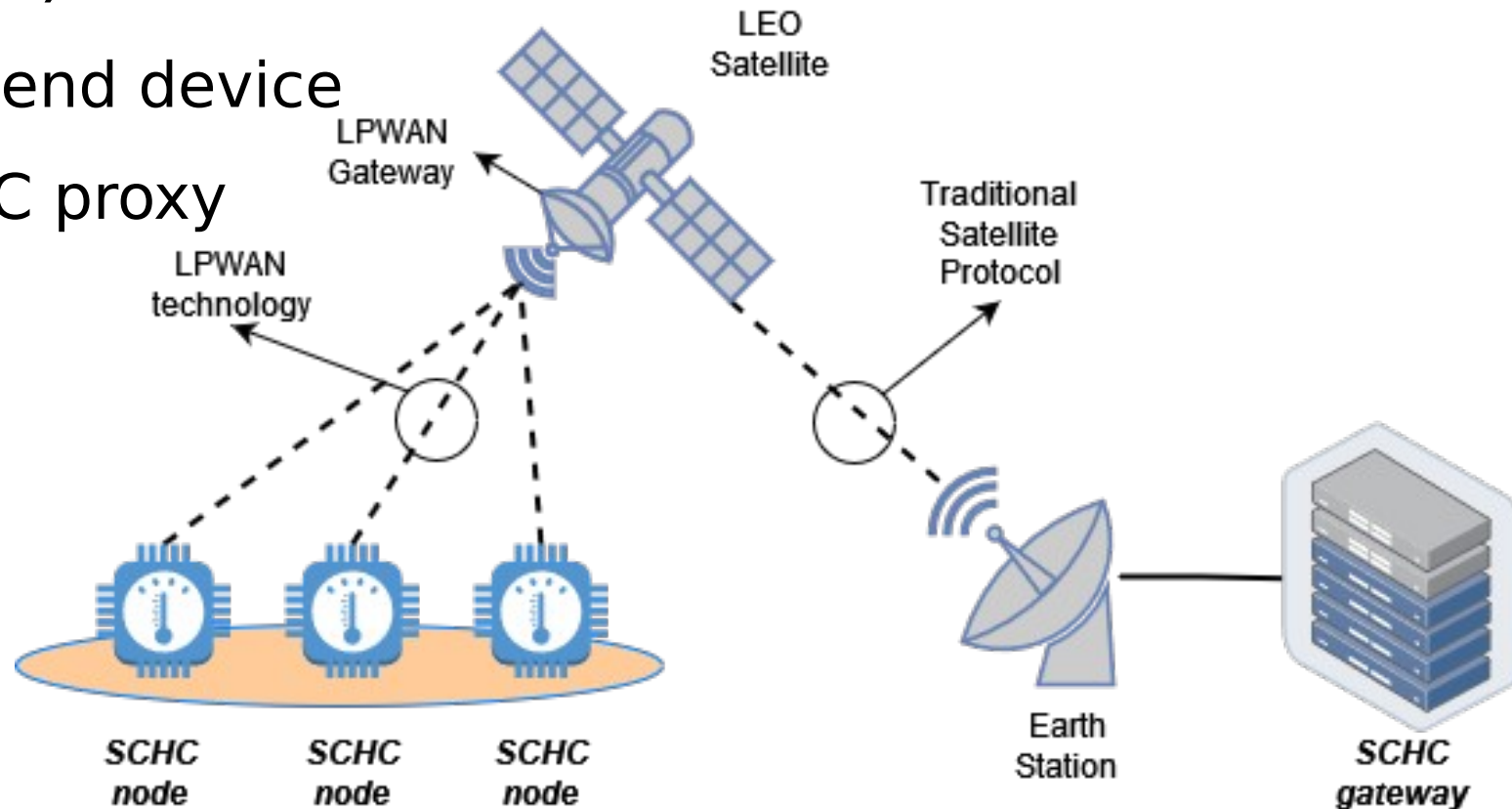
- The current version of the draft only considers disruptions in zero-energy devices (ZE devices).
- In particular, the draft defines several topologies only for cellular-based ZE devices.
- In addition, the draft shows a solution for disruptions using a SCHC proxy.
 - The document **does not define** the flow of messages through the proxy. It only indicates that it **will maintain the state of the connection**



New features

- An example of a scenario with disruptions is SCHC communication via LEO satellites using Direct-to-Satellite IoT (DtS-IoT) architecture.

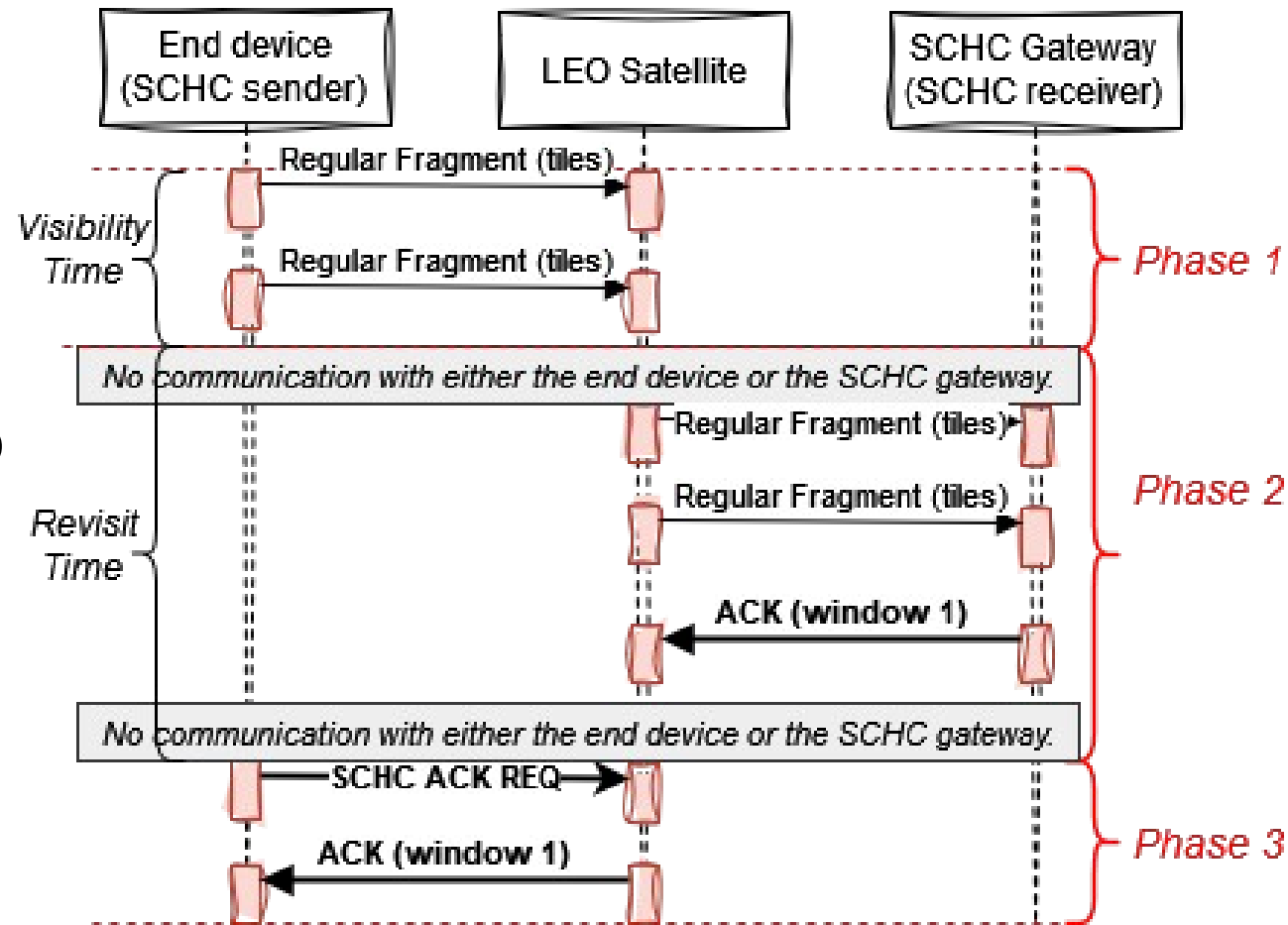
- End-device \square SCHC end device
- LEO Satellite \square SCHC proxy



SCHC over DtS-IoT

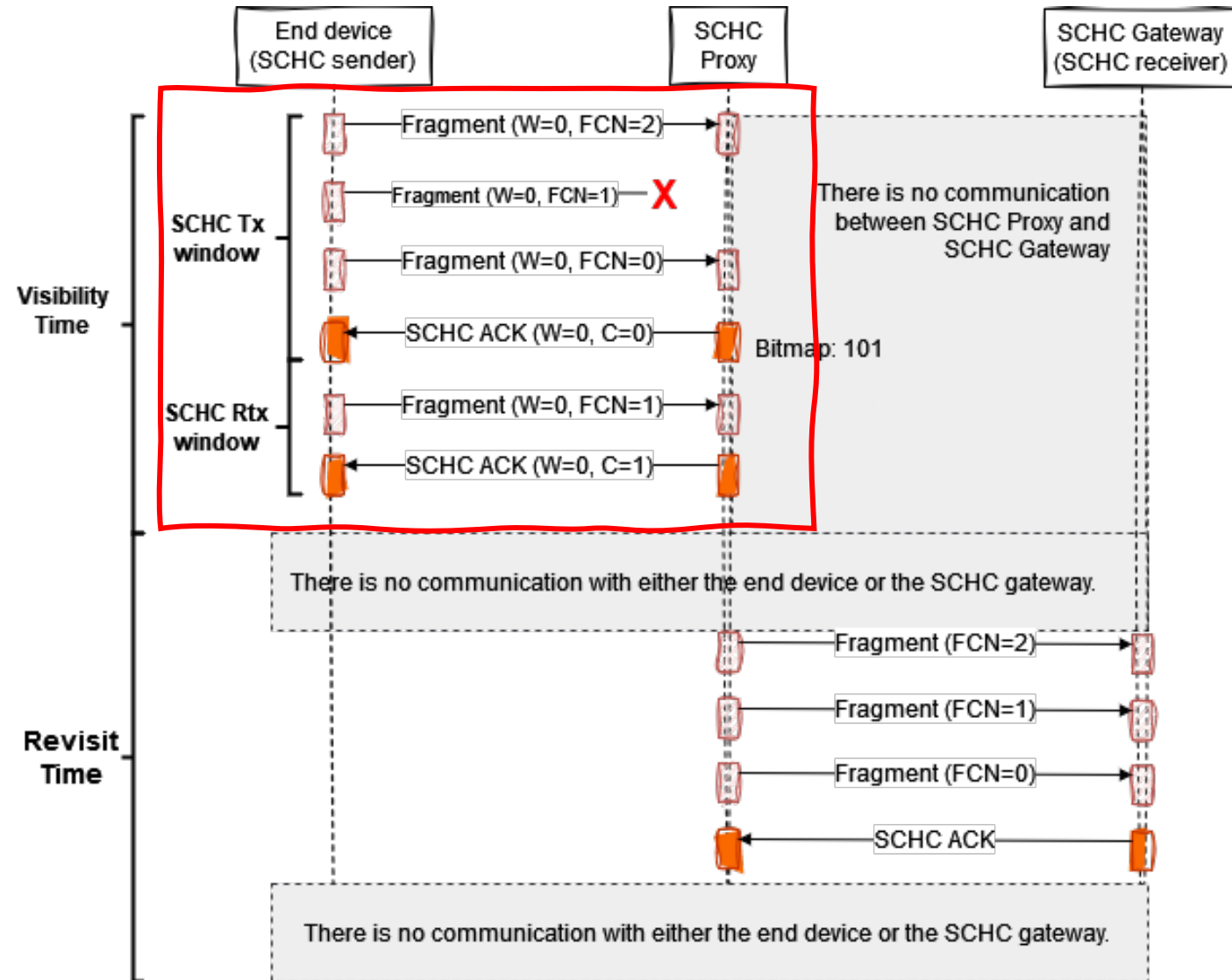
Most SCHC profiles have defined the uplink to use ACK-on-Error fragmentation mode.

- **Phase 1:** End device sends tiles to the satellite, which stores messages for delivery to the SCHC gateway in Phase 2
- **Phase 2:** SCHC gateway receives regular SCHC fragments and sends an SCHC ACK acknowledgment
- **Phase 3:** End device receives the SCHC ACK



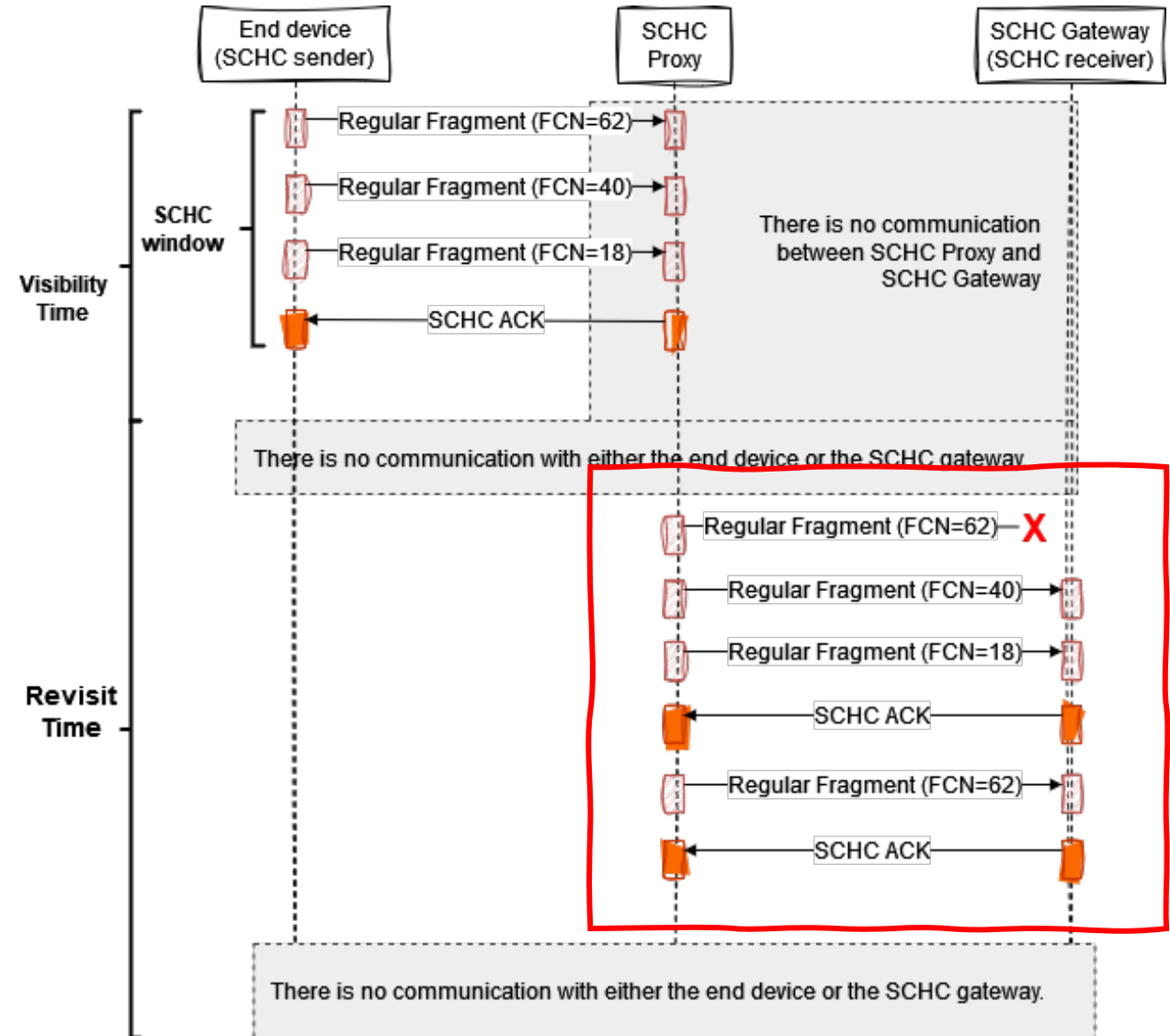
SCHC over DtS-IoT

- Increased tile loss leads to more retransmission windows
- Higher retransmissions extend SCHC packet transfer time
- LEO satellite as SCHC proxy with **local acknowledgements** and **retransmission** features to enhance performance



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Thanks for your attention

Questions?