SIP Session-ID

draft-kaplan-sip-session-id-02

Hadriel Kaplan

Q&A

1. How is this different from secure-call-id, or why do we need this if we do secure-call-id?

    Secure-call-id only tries to keep Call-ID consistent across SBC's or B2BUA's which change it for security properties

    Tons of B2BUA's change Call-ID's

1. But there exists [insert-whacky-scenario-here] which won't work for this

    That's ok, I'm not trying to boil the ocean

1. There are B2BUA's which remove headers they don't know about

    Yes, I know, and that's ok – if this is useful, their customers will make them support it; if not, then not

1. There are lots of UA's that won't support generating this for a long time if ever, so this won't happen

    That's ok, a proxy and B2BUA can generate it

1. SBC's are evil and will remove this thing just to spite us

    No, SBC's do what their owners want them to do – if we don't give them a reason to remove it (and give them a reason to keep it), this will be ok

The Problem

- We need a way for monitoring/debugging tools to follow a dialog across SIP elements and domains

- But B2BUA's change the Call-ID
  - a LOT of B2BUA's, far more than SBC's

- Why?
  - Security: addressed by secure-call-id
  - Other reasons: addressed by this draft

The Requirements

1. It must be possible to pass the identifier through B2BUA's, with as high a probability as possible

2. The identifier must not reveal any identity information of any type

3. The identifier must not reveal the Call-ID/tags changed to someone getting the identifier, as much as possible

    - This last one is in slight conflict with Req 2, but I think it's ok
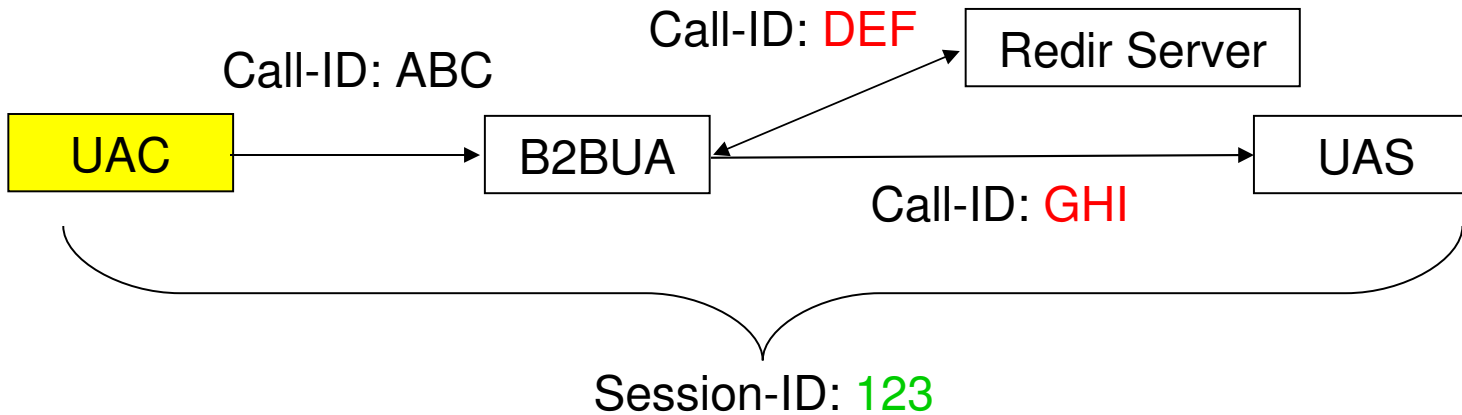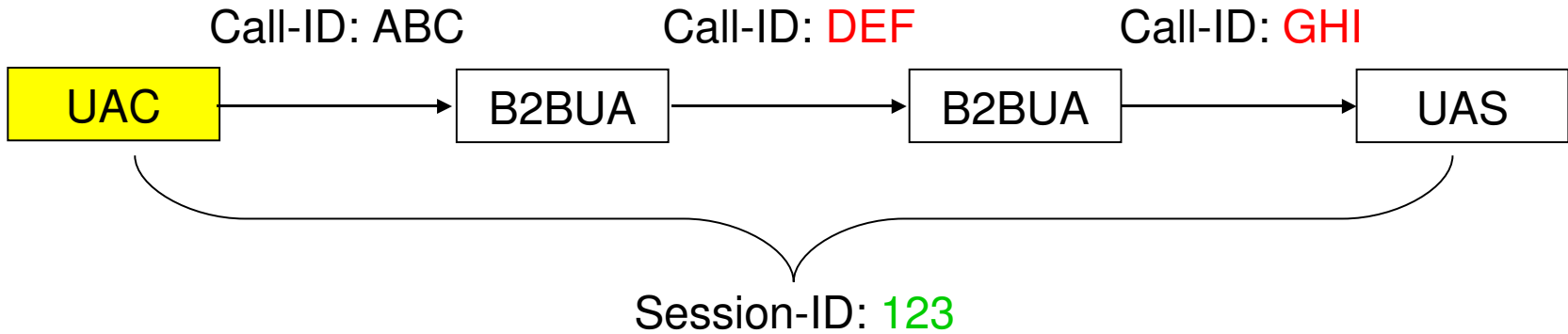
The Draft Solution

- Create a new, pseudo-random, fixed-length value

- Put it in a header: "Session-ID"

- Put that header in out-of-dialog requests

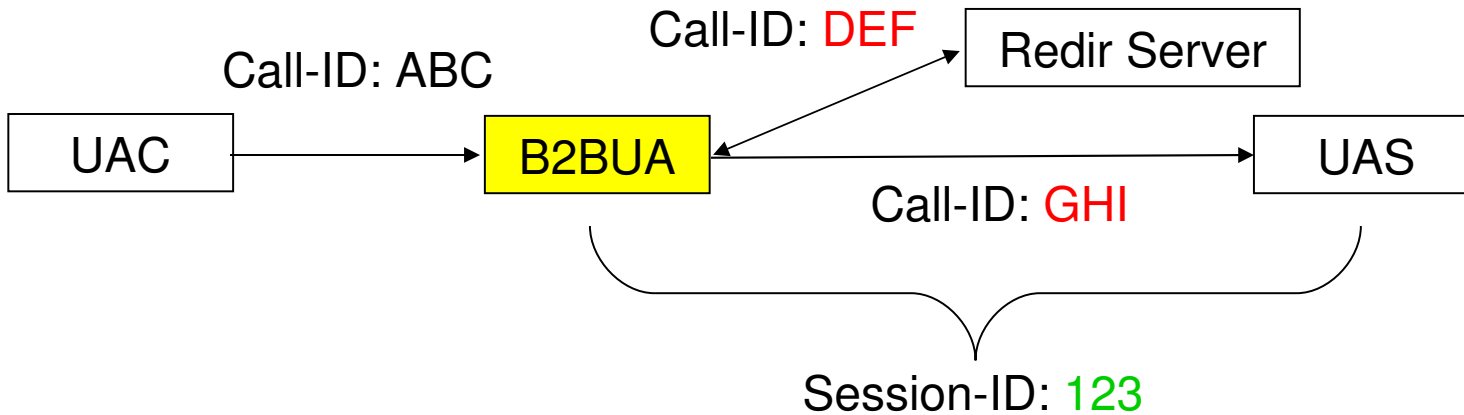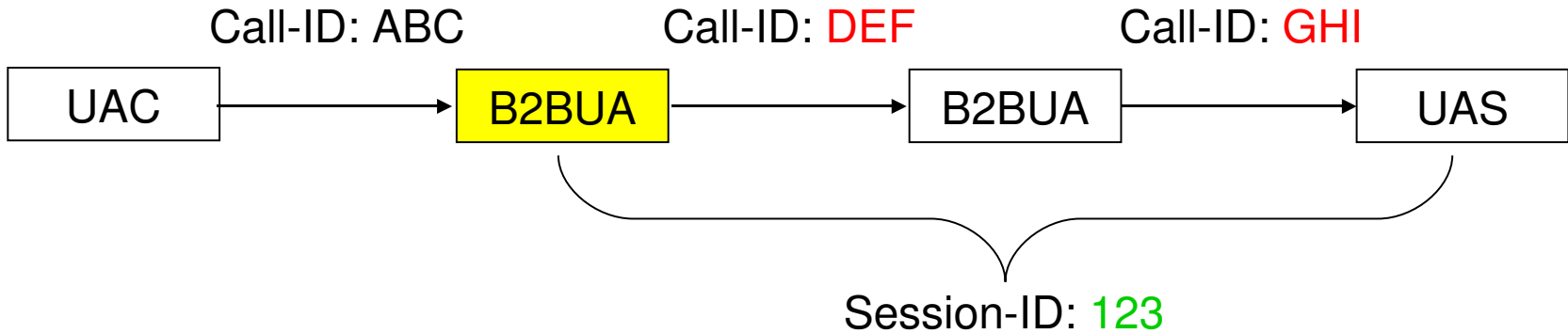- Reflect it in responses and include in mid-dialog requests

The Plan

1. Publish the draft
2. Have B2BUA's insert it if UA doesn't
3. Update wireshark and monitoring tools to look for Session-ID to track calls
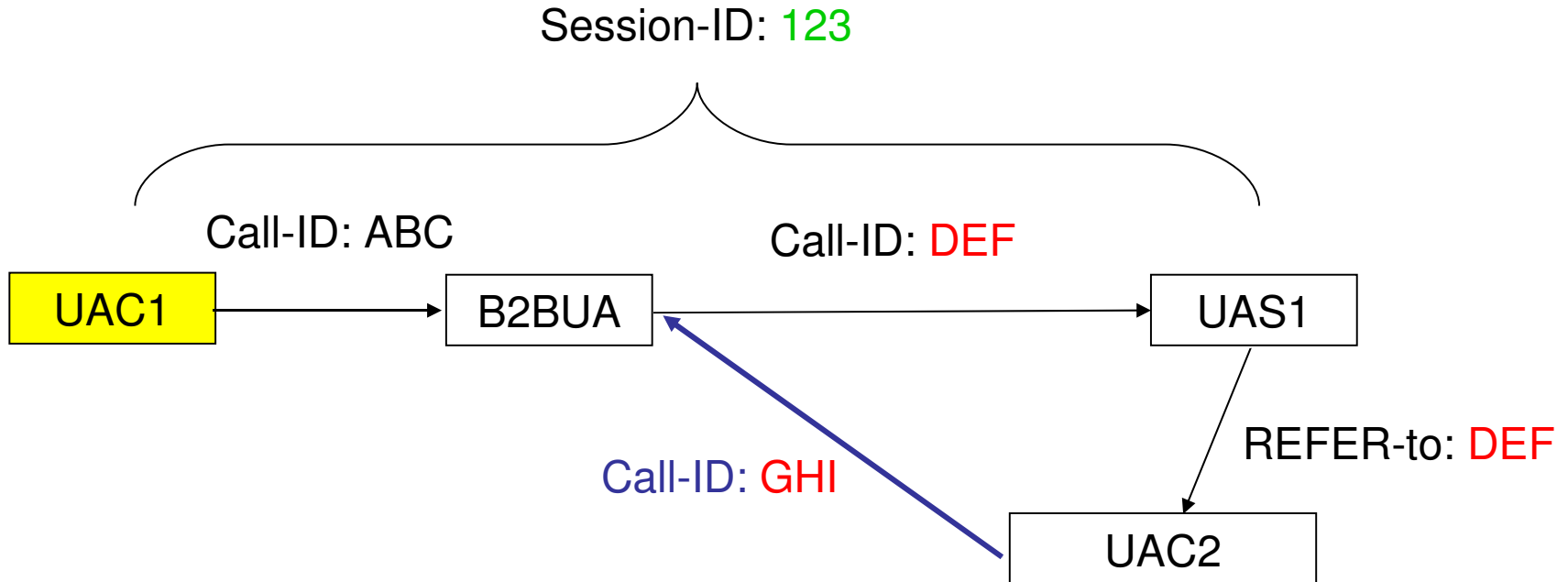4. Profit

Diagrams

Call-ID: ABC   Call-ID: DEF   Call-ID: GHI

| UAC | → | B2BUA | → | B2BUA | → | UAS |

Session-ID: 123

Call-ID: DEF → Redir Server

Call-ID: ABC

| UAC | → | B2BUA | → | UAS |

Call-ID: GHI

Session-ID: 123

More Diagrams

Call-ID: ABC   Call-ID: DEF   Call-ID: GHI

| UAC | → | B2BUA | → | B2BUA | → | UAS |

Session-ID: 123

Call-ID: DEF   Redir Server

Call-ID: ABC

| UAC | → | B2BUA | | UAS |

Call-ID: GHI

Session-ID: 123

When it doesn't work…

Session-ID: 123

Call-ID: ABC   Call-ID: DEF

| UAC1 | → | B2BUA | → | UAS1 |

Call-ID: GHI

REFER-to: DEF
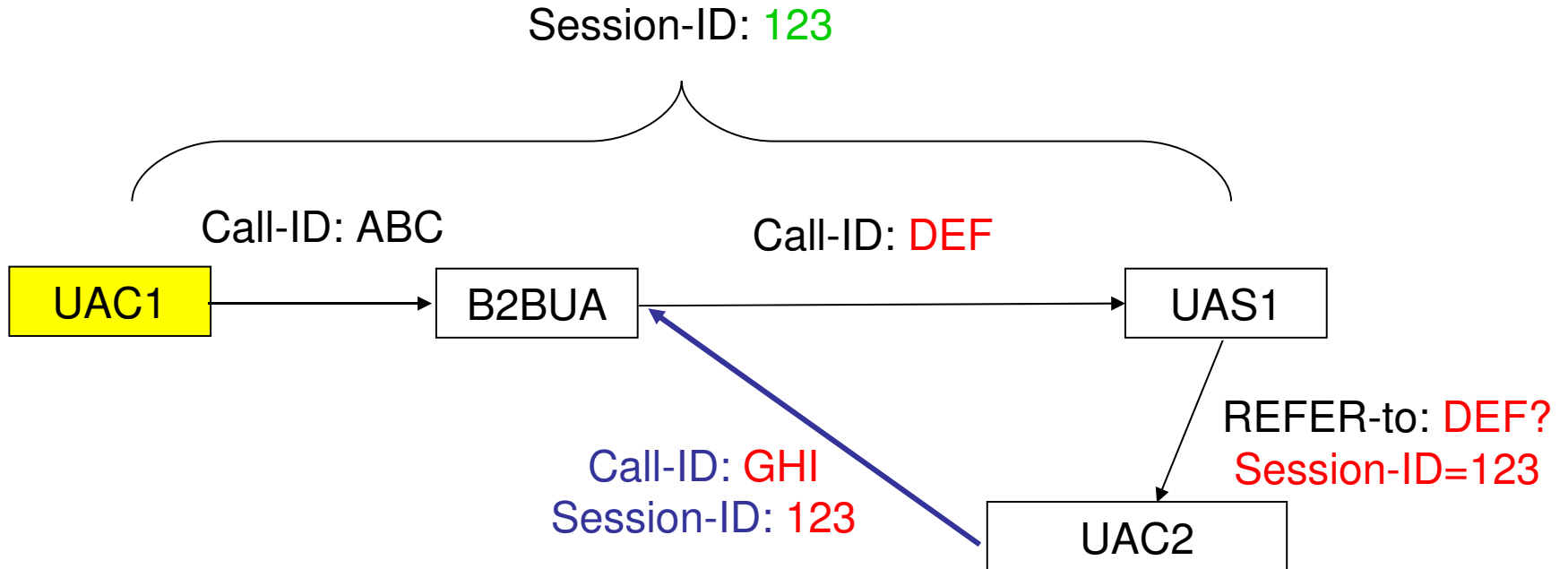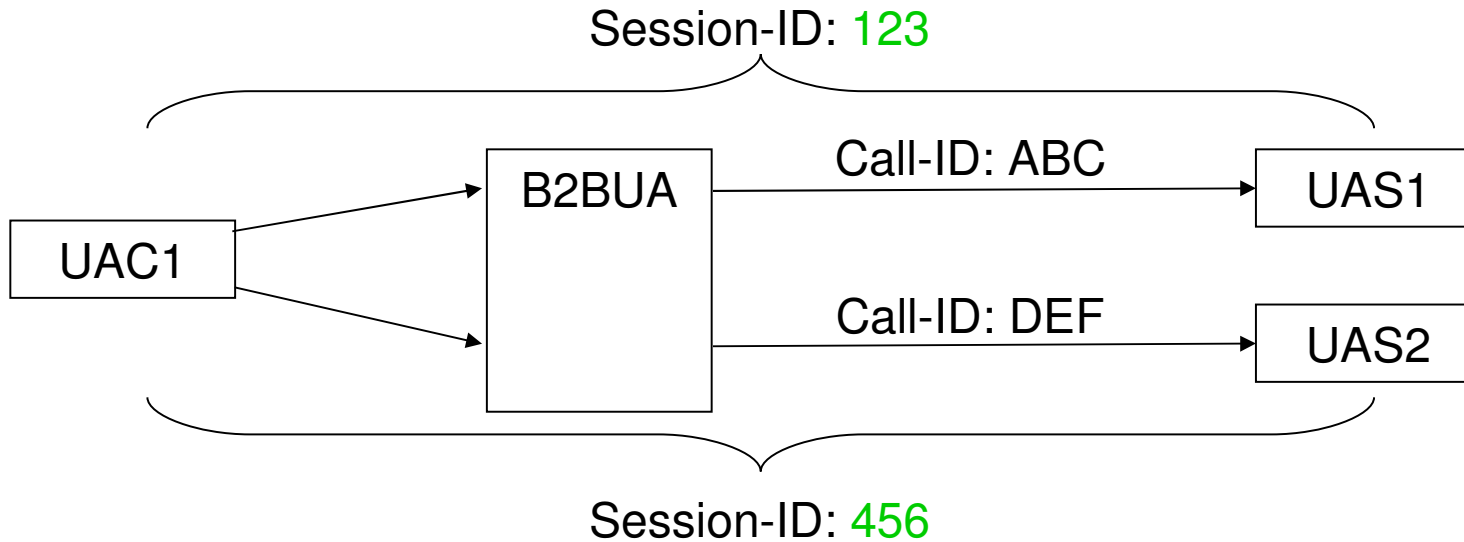
UAC2

Note: this *could* work,
if B2BUA and UAS1
supported Session-ID

Session-ID: 456 – this
is a separate session

How it could work…

Session-ID: 123

UAC1 → B2BUA → UAS1

Call-ID: ABC

Call-ID: DEF

REFER-to: DEF?
Session-ID=123

UAC2

Call-ID: GHI
Session-ID: 123

When it doesn't work 2...

Session-ID: 123

B2BUA   Call-ID: ABC   UAS1

UAC1

Call-ID: DEF   UAS2

Session-ID: 456

Session-ID: 123

UAC1 sends
REFER to B2BUA,
which processes
the REFER by
tying the two
dialogs together

B2BUA   Call-ID: ABC   UAS1

Call-ID: DEF   UAS2

Session-ID: 456
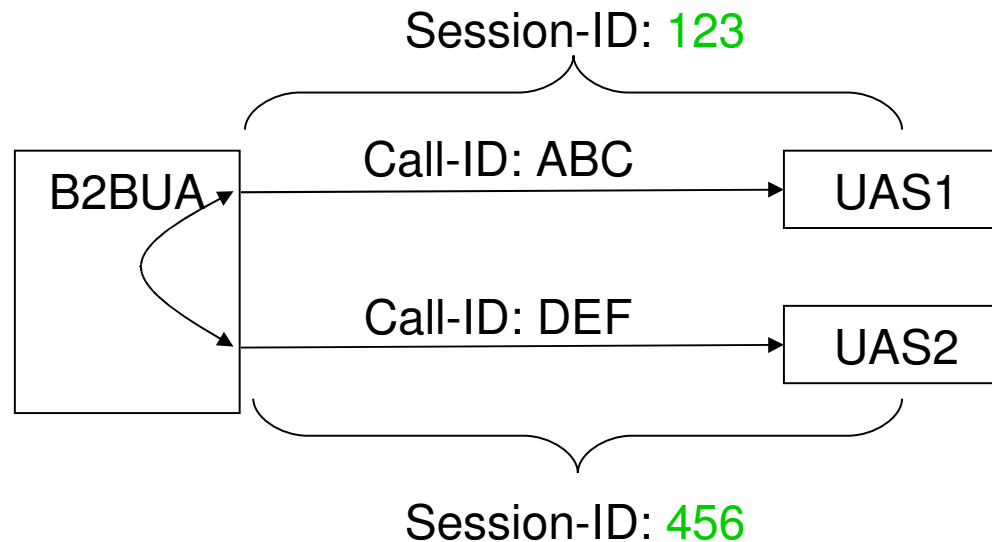
Solving World Hunger

- We could try to make these non-working cases work, but…
- It adds complexity
- It may still not cover all cases
  - For example, B2BUA may not actually need to re-Invite either UAS in the last scenario
- It will take longer to document in an RFC
- Troubleshooting mechanisms need to be simple and easy to implement

Issues

- Not all devices will support Session-ID
- There will be some corner-cases/scenarios that won't work
- That's life – we can only do what is possible given the constraints
- The point is we're making it better
- This is not used for dialog matching, so failure to be used does not mean failure of message processing/state

Proposal

- Answer the question: Is there interest in this type of thing?

- Choose from options:

  1. Send to DISPATCH, hold a BOF, then in 2010 form a WG, then in 2012/2013 publish an RFC

  2. Ask AD's for a mail list and design team without WG

  3. Do individual draft, direct to RFC-Editor

  4. Fourth option??