

GRUU

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Changes in -06

- Editorial as a result of RFC-ED early copy experiment

Two Issues Raised

- Indicating URI is a GRUU
- EP RR Removal

Proposed Consensus on Indicating GRUUness

- No URI Parameter
- Clarify that Supported: gruu means that GRUU spec is supported
 - Contact will usually be a GRUU, but can't be certain
 - Endpoint should assume a GRUU unless it gets positive information otherwise
 - Endpoint shouldn't bother with hacks to work around non-gruuness (text suggested by Dale)

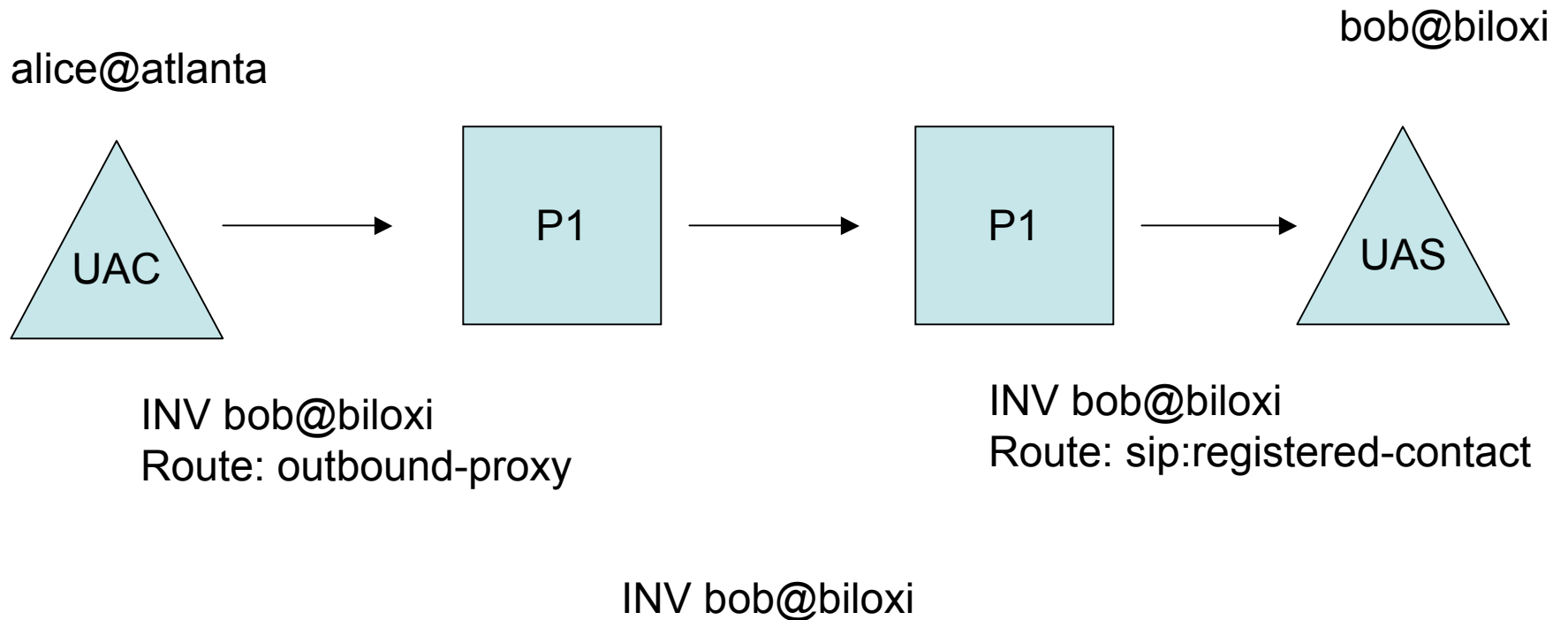
Sidebar: Retargeting

- My proposal
 - Retargeting: change in resource to which request was destined
 - Criteria: new target's authenticated identity in the broadest sense will not match old one's
 - Grey Areas
 - Aliases (i.e., multiple public IDs in IMS)
 - Name to address translations (800 translation)
 - Routing: change in request destination to reach the resource to which request is destined
 - Outbound proxies
 - Service Routing (IMS ISC)
 - Contact processing at home proxy

Impact on SIP

- Retargeting implies rewrite of Request URI
- Routing implies modification of Route header field
- Handling Redirection
 - 305 implies a re-routing, place contact into Route header of recursed request (see draft-rosenberg-sip-route-construct)
 - All other 3xx imply re-targeting
- Backwards compatibility issue
 - Tie to sip-outbound (and perhaps gruu – see later)
 - Home proxy would use routing for sip-outbound contacts, retargeting for all others

Impact on Trapezoid



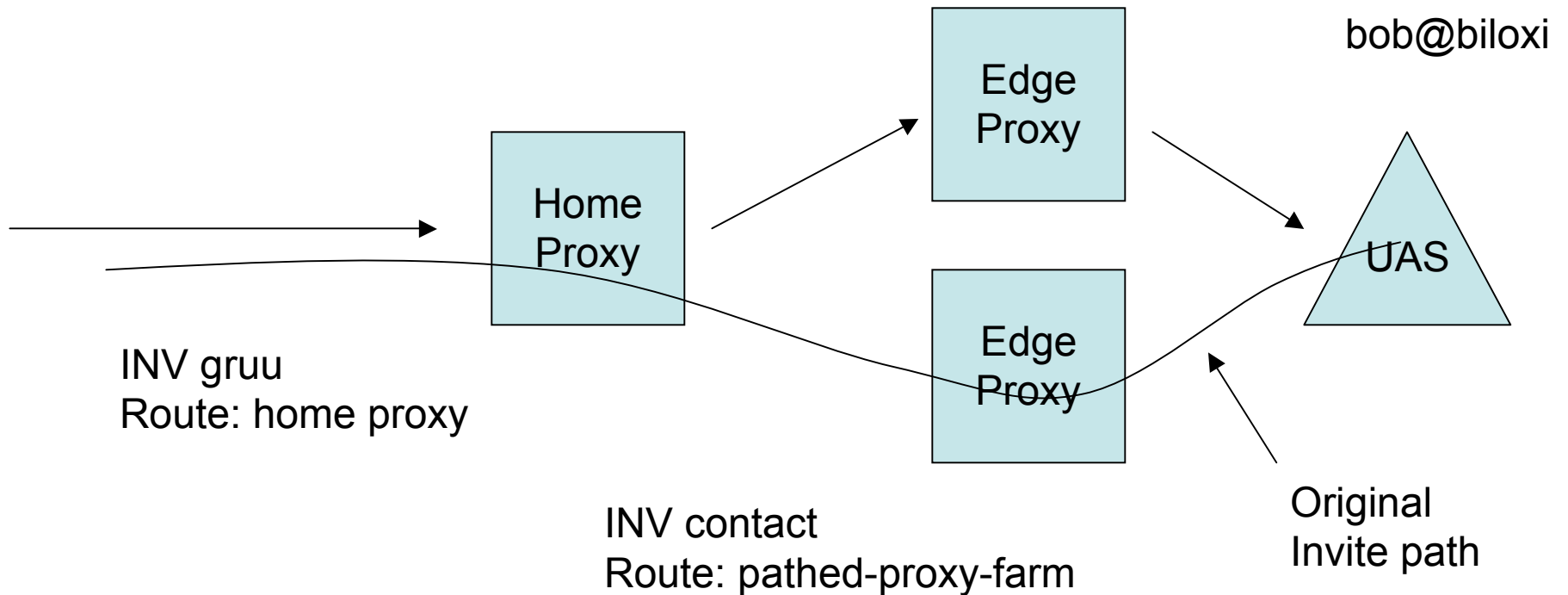
Benefits

- Architecturally – cleanly separates two distinct concepts
- Makes change in request-URI have a single meaning for impacting proxy behavior
- Extends loose routing goodness to UAs
 - Can specify “services” through user part as well – extremely useful
- Endpoint knows at which address it was contacted
 - Eliminates need for P-Called-Party in RFC 3455
- Eliminates special case processing of grid in proxies
- Allows for clear separation of request history and retargeting
 - Request history collects routing steps in network
 - Reasons are not service specific – services impact retargeting

Now, back to GRUU...

- Several concerns arisen against EP RR removal
 - Hard to understand and follow
 - Clearly a hack
 - NEW: will break many implementations in significant ways

Problem



Path value pointed to proxy farm for load balancing

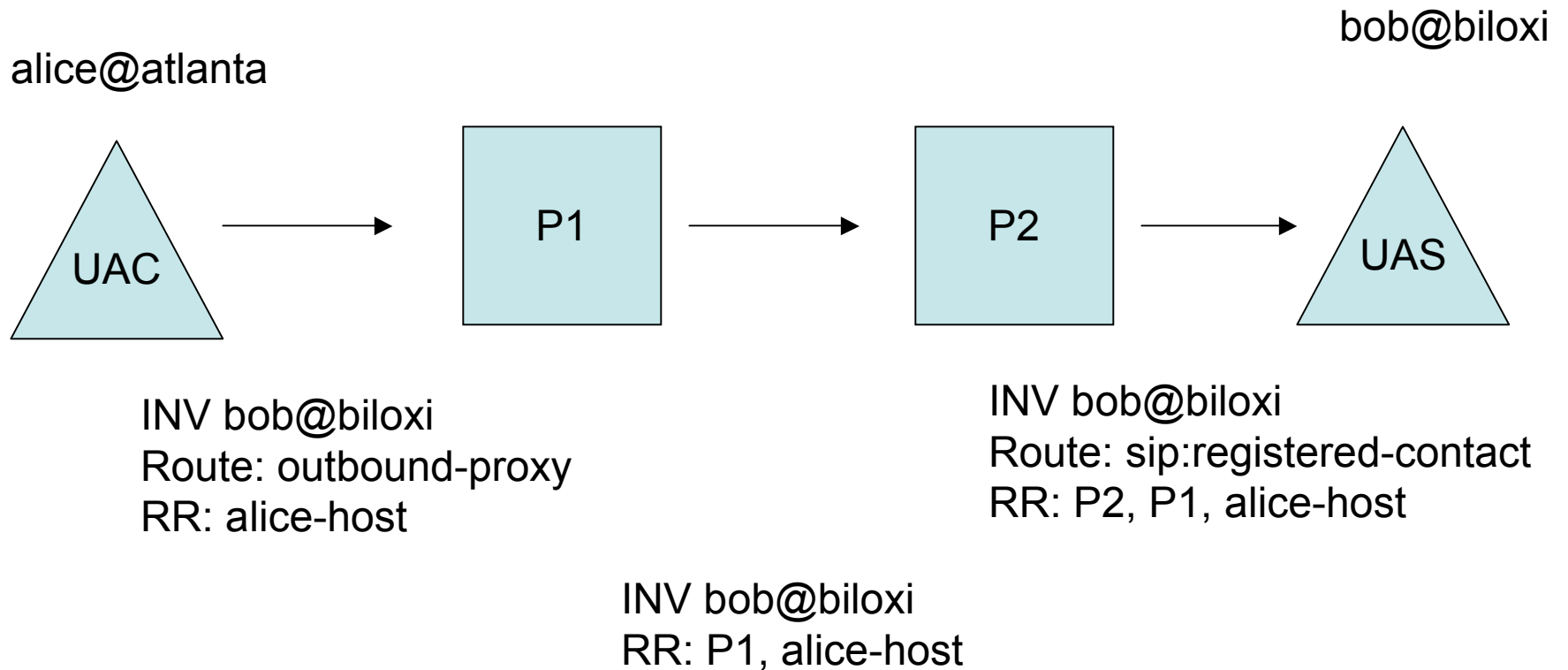
Fundamental Problem

- GRUU won't work if proxy that saw the original INVITE retained any kind of state
 - Either internal to the proxy
 - Placed into mid-dialog record-route
- This is a very common practical case

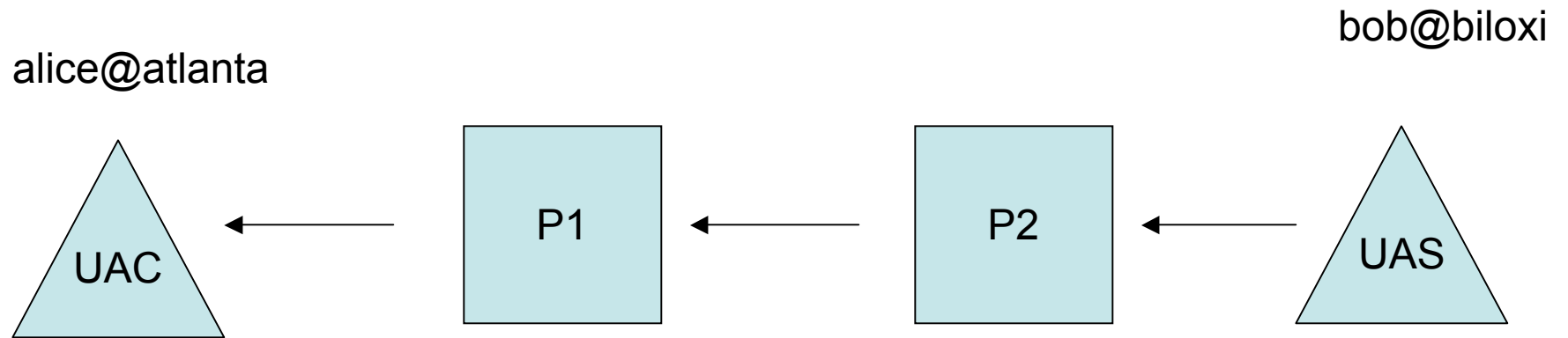
Proposed Solution

- Revisit proposal discussed at IETF-63
 - When UAS gets INVITE, it
 - Inserts its GRUU into Contact
 - Record-routes with its IP/port
 - When a UAC sends INVITE, it
 - Inserts its GRUU into Contact
 - Record-Routes with its IP/port
- This mirrors the retargeting algorithm, but for mid-dialog requests!

Initial INVITE



Initial INVITE

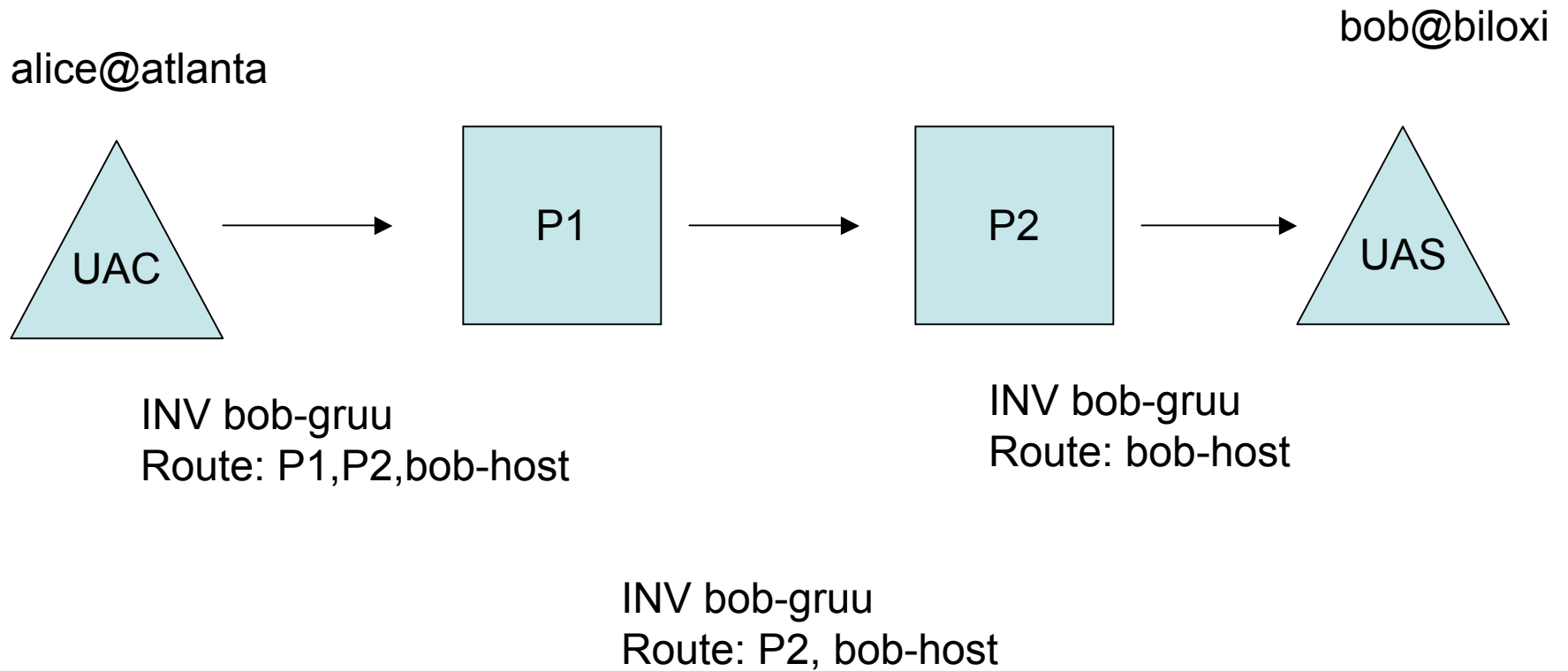


200 OK

RR: bob-host, P2, P1, alice-host

Contact: bob-gruu

Mid-Dialog INVITE



Comparing Initial and Mid-Dialog Requests

INVITE AOR
Contact: gruu
Route: hops

Initial

INVITE gruu
Contact: gruu
Route: hops

Mid-Dialog

Request-URI: Logical identifier of target
AOR for initial requests
GRUU for mid-dialog

Implications of Change

- Home proxy no longer does registration lookups on mid-dialog requests
 - Pro: performance improvement
 - Con: If client re-registers, mid-dialog requests don't follow new path
- Endpoint address cannot be modified by re-INVITE or UPDATE
 - Since its in a Record-Route
 - But could be changed with INVITE w/Replaces
- Big benefit: preserves the way mid-dialog requests work today

Specific Proposal

- Modify sip-outbound to specify logic for initial requests
- Modify gruu to specify logic as proposed here for gruu
- Process suggestion: sip-outbound and gruu are sufficiently inter-related we should submit to IESG together