

# GRUU

again  
for the last time  
really

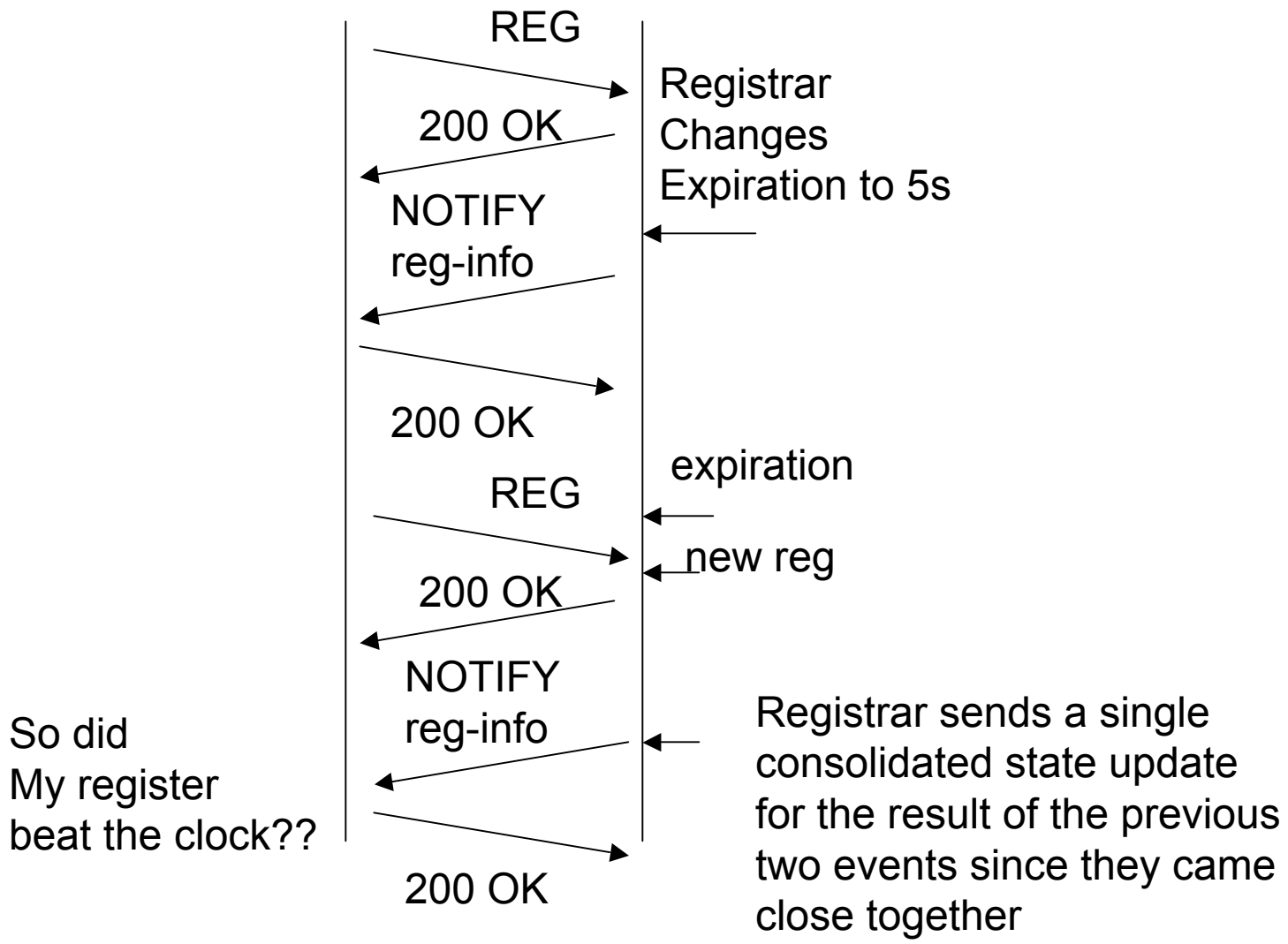
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# Changes from -11

- Minor Changes
  - Removed references to provisional responses for non-INVITES
  - Added note from Dales draft about not mucking with Contacts with ;gruu
  - Added note from Dale's draft about treating GRUU opaquely and not modifying URI parameters
- Updated appendix to use EKR's stateless tokens draft

# Main Change: The Register Race



# General Problem

- IF the registrar is going to muck with registrations, we need a reliable way for client to synchronize its temp-gruu with server at any time
  - Determine whether its set of valid temp-gruu match the servers

# Solution in GRUU-12

- If server modifies expiration times, **MUST** implement reg-event and gruu extension
  - Client that implements reg-event and GRUU **MUST** support gruu-reg-event
- Reg-event notifications contain CSeq of first contact registered to that gruu with a given call-id
- Client keeps all temp-gruu learned in REGISTER responses whose
  - Call-ID matches that of reg-event
  - CSeq is higher than that of reg-event

# Side Effect

- Changing Call-ID in REGISTER refresh will
  - Expire all previous temp-gruu
  - Not cause any outage in registration – just a refresh – low overhead
- Provides a crude bulk invalidation technique

# Consequences

- If an instance fails and recovers and registers with a new Call-ID and same instance-ID
  - All temp-gruu are invalidated
- Stateless token generation needs to use Call-ID and original CSeq instead of wallclock time

# Other ML Issues

- Jeroen: temp GRUUs can be long
  - Will note this
- Ekr-1: Is Supported or +sip.instance the trigger for GRUU generation?
  - As it is currently - +sip.instance.
- Ekr-2: inclusion of pub-gruu and temp-gruu in REGISTER MUST NOT or SHOULD NOT?
  - Current SHOULD NOT is fine



# Other ML Issues

- Ekr-3: Should a rebooting UA remove a stale contact?
  - No, as it is now
- Ekr-4: Separators needed in string for cookie?
  - Yes – will add
- Jeroen-1: only do GRUU processing for non-expiring contacts
  - Yes – will add
- Jeroen-4: What if there are multiple contacts with same instance and no reg-id (GRUU but not sip-outbound)
  - Need to update – use outbound-like behavior to take most recent contact

# Next Steps

- I have incorporated all comments into a working -13
- Once blackout period ends, -13 can be submitted and go to IESG