

# IETF 80 MMUSIC WG

draft-elwell-mmusic-ice-updated-offer

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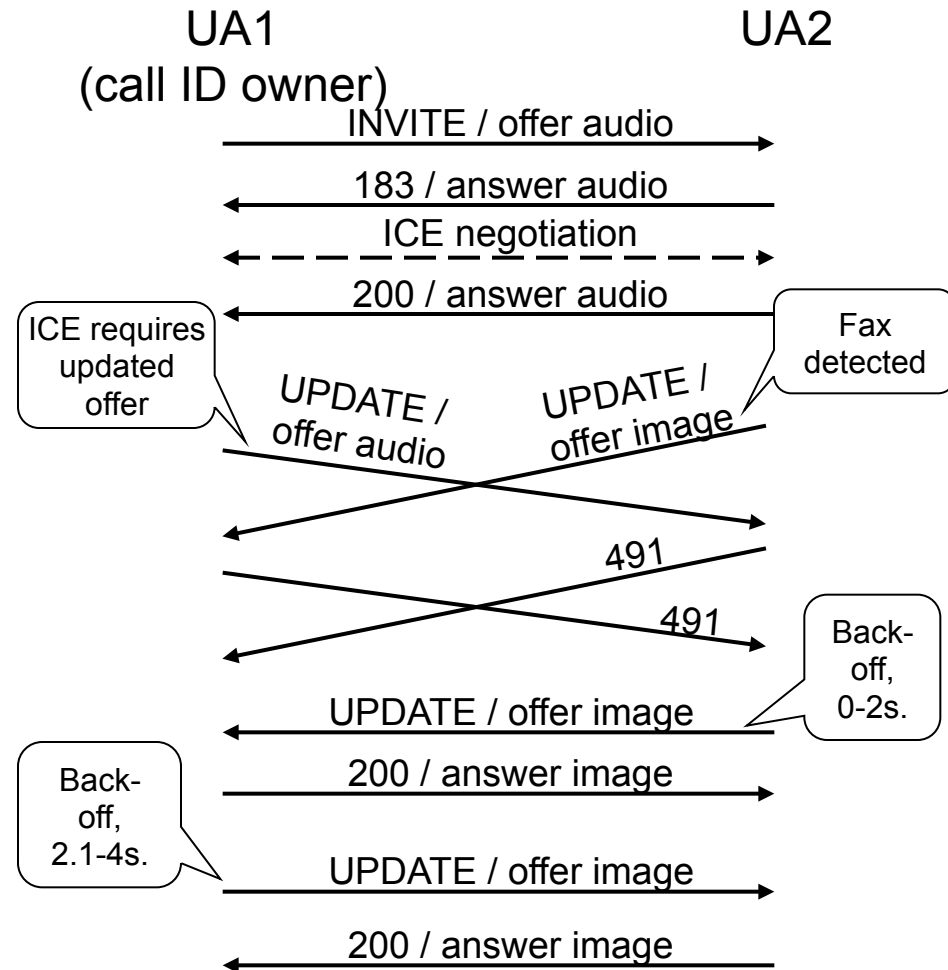
Andy Hutton

# Background

- Discussion during last year on barriers to implementing ICE
- Alternative proposals for IPv4/IPv6 negotiation
  - <https://datatracker.ietf.org/doc/draft-boucadair-mmusic-altc/>
  - <https://datatracker.ietf.org/doc/draft-hutton-mmusic-icemicrolite/>
- Bar BoF at IETF#78
- Present draft discusses a couple of issues not previously raised
- Purpose: to get feedback on whether these issues need to be addressed and how

# Issue 1 – Interaction with fax

- Collisions between ICE updated offer and attempt to switch media on fax detection
- back-off and randomized delay before trying again
- Potential failure of fax, through
  - inability to switch media before fax machine times out)
  - middleboxes blocking media flow because SDP not updated in time

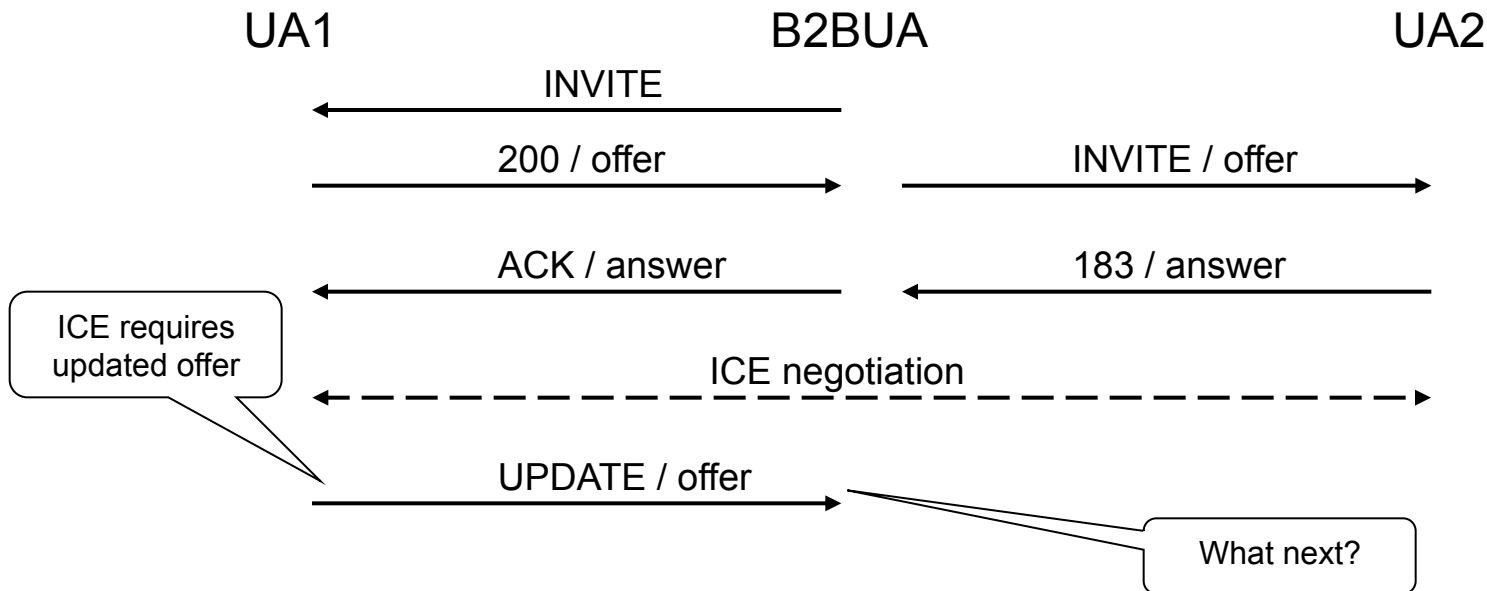


# Issue 1 – Possible Remedies

- Delay ICE updated offer
  - UA1 doesn't know fax will be detected
- Delay fax updated offer
  - Difficulty choosing how long to delay, to allow time for receipt of ICE updated offer without being too late for fax to work
- Always require the ICE update so that fax UA will expect it
  - Change to ICE spec
  - Still won't work under all conditions
- Use pre-conditions to prevent media flow before ICE updated offer
  - Change to ICE spec
  - Heavy burden of having to support 100rel and pre-conditions

# Issue 2 – Interaction with 3PCC

- 3PCC call establishment in accordance with RFC 3725 Flow I is commonly implemented
- With this flow, the ICE updated offer is not possible in a timely manner, because the state of the second leg does not permit



# Issue 2 – Possible Remedies

- Avoid 3PCC
  - Not feasible – REFER, for example, doesn't work when sent to PSTN gateways
- Delay ICE updated offer
  - UA1 unaware of status of INVITE transaction to UA2, so doesn't know how long to delay
- Delay ICE until UA2 answers
  - How would UA2 know it has to do this?
  - Clipping of media
- Use 100rel and UPDATE for forwarding the updated offer to UA2
  - Raises the bar
  - UA2 is a 3PCC-unaware UA, so how would it know it has to do this?

# Conclusions

- Two cases of bad interactions caused by the ICE updated offer
- Any other suggestions for work-arounds?
- Do we really need the ICE updated offer
  - How many middleboxes work well with the updated offer but would not work without it?
  - Or putting it another way, how many middleboxes would still fail with the updated offer (e.g., rejecting it)?
  - It is only SHOULD for cap-neg, so why MUST for ICE?