

TRICKLE ICE

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draft-ietf-mmusic-trickle-ice

Emil Ivov, Eric Rescorla, Justin Uberti

95%



draft-ietf-mmusic-trickle-ice-sip

E Ivov, Thomas Stach, E Marocco, C Holmberg

98%



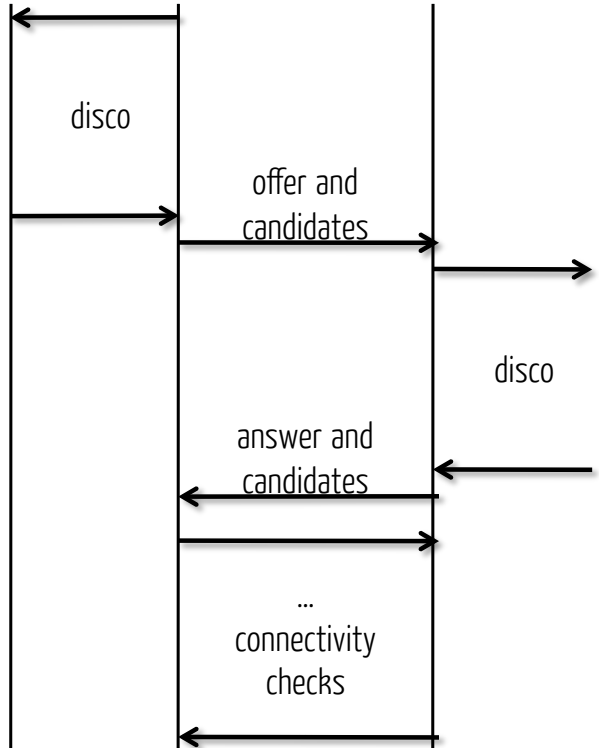
draft-ivov-disspatch-sdpfrag-03

Emil Ivov, Adam Roach, Anyone Else?

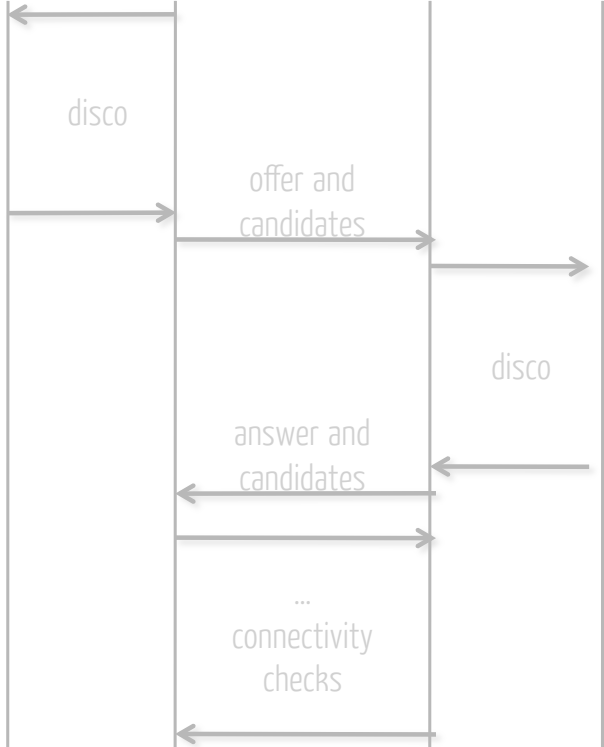
merged with draft-ietf-mmusic-trickle-ice-sip



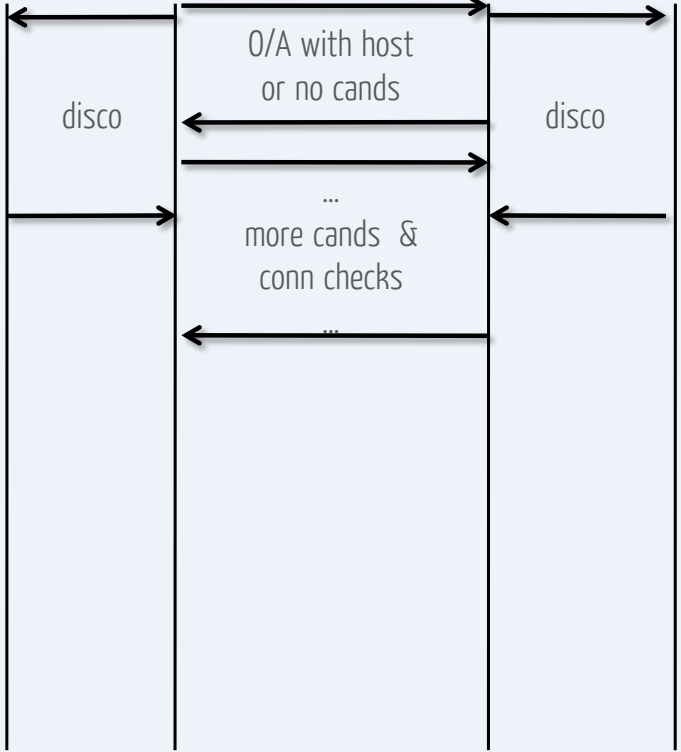
Reminder: Vanilla ICE



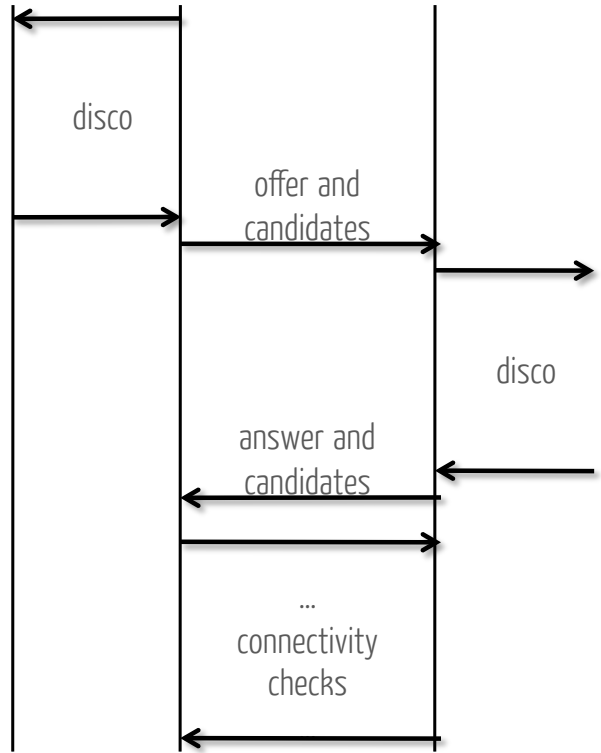
Reminder: Vanilla ICE vs Trickle ICE



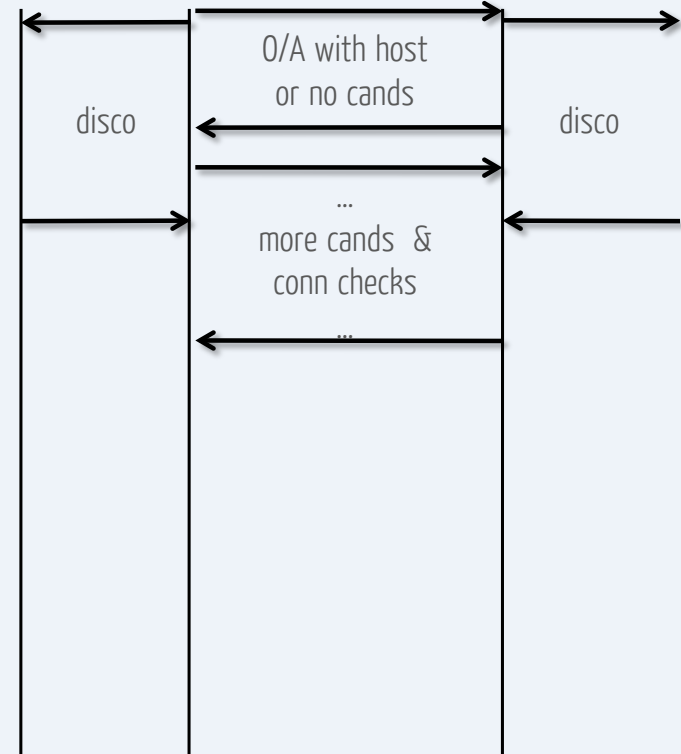
Vanilla ICE as per RFC 5245 draft-ietf-mmusic-trickle-ice/-trickle-ice-sip



Trickle ICE 4



Vanilla ICE as per RFC 5245



Trickle ICE

draft-ietf-mmusic-trickle-ice

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Thanks: Rajmohan Banavi & Peter Saint-Andre

there is this one issue:

```
c=IN IP6 ::  
a=ice-options:trickle  
a=ice-pwd:asd88fgpdd7  
a=ice-ufrag:8hhY
```

**using IP6 :: seems
to wreak havoc**

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Mostly done. How about a working group last call?

draft-ietf-mmusic-trickle-ice-sip

E Ivov, Thomas Stach, E Marocco, C Holmberg



ΔS since 01

IANA Consideration added Security Consideration added

Info Package definition completed
as outlined in section 10 of [RFC6086]

18x w/o answer creates a dialog that allows for trickling to start

```
Alice                               Bob
|                                   |
|   INVITE (Offer)                 |
|----->|
|   183 (Answer)                   |
|<-----|
|   INFO/OK (SRFLX Cand.)         |
|----->|
|           +-----+
|           |Bob: Now I know Alice|
|           | is ready. Send INFO! |
|           +-----+
|   INFO/OK (SRFLX Cand.)         |
|<-----|
|           |
|   200/ACK (Answer)              |
|<-----|
```

```
Alice                               Bob
|   INVITE (Offer)                 |
|----->|
|   183 (-)                         |
|<-----|
|   INFO/OK (SRFLX Cand.)         |
|----->|
|           +-----+
|           |Bob: Now I know again|
|           | that Alice is ready. |
|           | Send INFO!           |
|           +-----+
|   INFO/OK (SRFLX Cand.)         |
|<-----|
|           |
|   183 (Answer) opt.             |
|<-----|
|   INFO/OK (SRFLX Cand.)         |
|<-----|
|           |
|   200/ACK (Answer)              |
|<-----|
```

INFO confirms that the dialog is established (independently from Q/A)

3PCC Consideration added

```
Alice                               Bob
|   INVITE (100rel)                   |
|----->|
|   183 (Offer)                       |
|<-----|
|   PRACK (Answer)                    |
|----->|
|                                     +-----+
|                                     |Bob: I know Alice can|
|                                     |trickle and I know her|
|                                     |dialog is in the early|
|                                     |state. Send INFO!    |
|                                     +-----+
|   INFO/OK (SRFLX Cand.)             |
|<-----|
|   INFO/OK (SRFLX Cand.)             |
|----->|
|   200 OK/ACK                        |
|<-----|
```

PRACK SUPPORTED

```
Alice                               Bob
|           INVITE                     |
|----->|
|   183 (-)                           |
|<-----|
|   INFO/OK (SRFLX Cand.)             |
|----->|
|                                     +-----+
|                                     |Bob: I know Alice can |
|                                     |trickle and I know her |
|                                     |dialog is in the early |
|                                     |state.                 |
|                                     |INFO can be sent.     |
|                                     +-----+
|   INFO/OK (SRFLX Cand.)             |
|<-----|
|   200 (Offer)                       |
|<-----|
|   ACK (Answer)                      |
|----->|
```

PRACK NOT SUPPORTED

Δs since -01

Definition of application/sdpfrag

- draft-ivov-mmusic-sdpfrag obsolete
- Based on ABNF of 4566bis, but all lines optional
- Gives some structure
- Take valid SDP and remove unnecessary parts
- Specific application MUST define allowed content

Δ s since -01

Info Package trickle-ice

- Uses application/sdpfrag
- Restricts content via ABNF
 - pseudo m-lines and a=mid as separator
 - ICE attributes (ice-ufrag, candidate, end-of-candidates, ...)
 - a=rtcp-mux, a=group: BUNDLE
Saves from gathering unnecessary candidates
 - Hook for extensibility

Δs since -01

INFO sip:alice@example.com SIP/2.0

...

Info-Package: trickle-ice

Content-type: application/sdp

Content-Disposition: Info-Package

Content-length: ...

Example

a=ice-pwd:asd88fgpdd777uzjYhagZg

a=ice-ufrag:8hhY

m=audio 9 RTP/AVP 0

a=mid:1

a=rtcp-mux

a=candidate:1 1 UDP 1658497328 192.168.100.33 5000 typ host

a=candidate:2 1 UDP 1658497328 96.1.2.3 5000 typ srflx raddr 10.0.1.1 rport 8998

a=end-of-candidates

m=audio 9 RTP/AVP 0

a=mid:2

a=rtcp-mux

a=candidate:2 1 UDP 1658497328 96.1.2.3 5002 typ srflx raddr 10.0.1.1 rport 9000

a=end-of-candidates

Open Issues: Rate of INFOs

What maximum rate will give a good trade-off?

One INFO every 100ms, 200ms?

easy answer: immitate behaviour for other requests