

**JSEP**

**Transport Warmup**

# Basic Idea

Caller

Callee

| --- offer 1 (sendrecv) ---> |

| <-- answer 1 (sendonly) --- |

| <-----**ICE/DTLS start**-----> |

*.time passes, caller accepts.*

| <-- offer 2 (sendrecv) ---- |

| <---- **callee media!!!** ----- |

| --- answer 2 (sendrecv) --> |

| ----- **caller media!!!** -----> |

# New APIs Needed

- **Create dummy track**

```
track = new MediaStreamTrack("audio")
sender = addTrack(track)
```

- **Ask not to receive media** `RTCRtpReceiver`.

```
active = false
// sets a=sendonly on the next
// createOffer/Answer call
```

# Full Sample (Place Call + Warmup)

- caller creates audio track and offers it -

```
track = gUM(audio)
sender = addTrack(track)
createOffer.then().setLD(offer).then().signal(offer) // a=sendrecv
```

- callee gets offer, sets receiver as not active, adds dummy send track -

```
offer = receive()
setRD(offer) // ring ring ring
receiver = getReceivers()[0]
receiver.active = false // give me a=sendonly in createAnswer
sender = addTrack(new MediaStreamTrack("audio")) // dummy track
createAnswer.then().setLD(answer).then().signal(answer) // a=sendonly
```

- answer is a=sendonly. Ensures caller doesn't send media during ring -

- caller gets answer, ICE and DTLS start, o/a 1 complete -

```
answer = receive()
setRD(answer)
```

# Full Sample (Callee Accept)

- callee replaces dummy track with real audio, toggles receiver, offers -

```
track = gUM(audio)
```

```
sender.setTrack(track) // replace dummy track
```

```
receiver.active = true // give me a=sendrecv in createOffer
```

```
createOffer.then().setLD(offer).then().signal(offer) // a=sendrecv
```

- callee -> caller media flows -

- caller gets offer, replies with normal answer -

```
offer = receive()
```

```
setRD(offer)
```

```
createAnswer.then().setLD(answer).then().signal(answer) // a=sendrecv
```

- caller -> callee media flows -

- callee gets answer, o/a 2 complete -

```
answer = receive()
```

```
setRD(answer)
```

# Out Of Scope

- BWE Warmup
  - Unclear this is needed
  - Caller may not want lots of data at this point (pre-accept)
  - Path may change (relay->direct)