W3C stuff

Identity and Streams

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requestIdentity
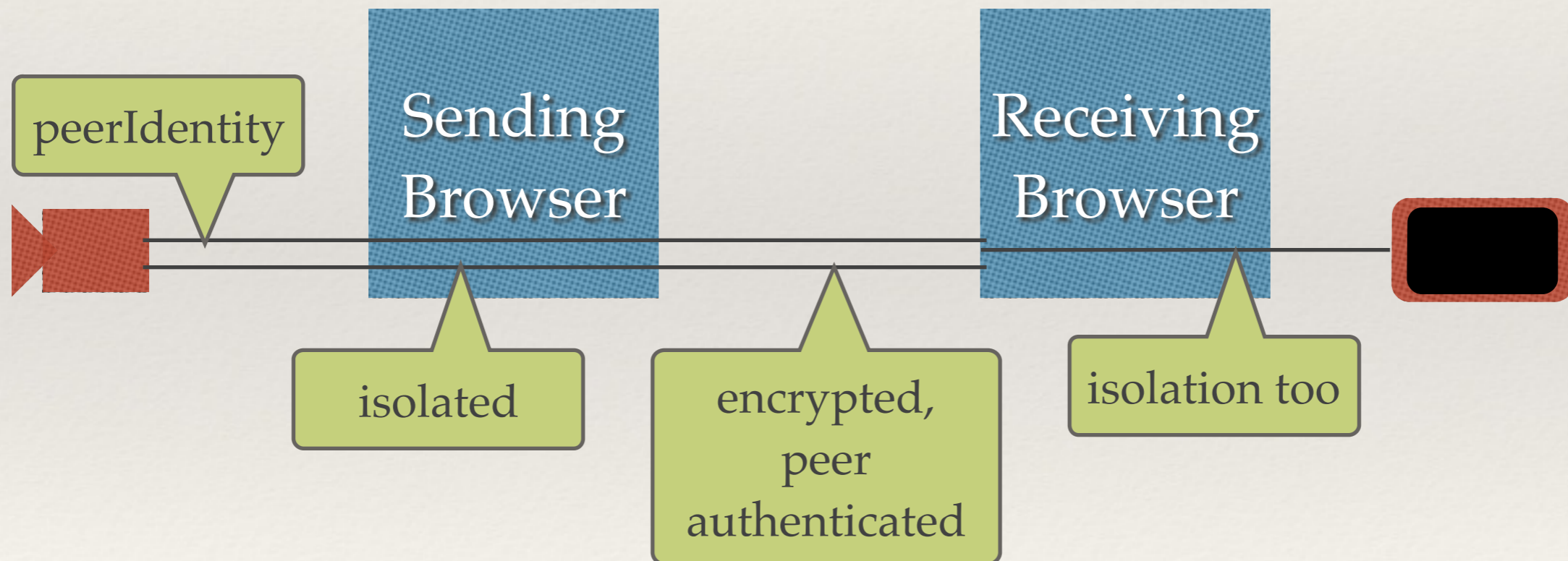
❖ Reminder: RTCConfiguration parameter with three values: "yes", "ifconfigured", "no".

❖ Originally included in support of browsers having IdP configuration

❖ We don't need this, does anyone else?

Stream Isolation

❖ A receiver should soon be able to distinguish between streams that are isolated at the source and regular streams

Isolation Scope

❖ gUM scopes the peerIdentity property to all tracks in the resulting stream

   ❖ Tracks can be separated, but they retain the property

❖ RTCPeerConnection scope is all tracks

   ❖ Any isolated track causes a peer to negotiate isolation on all DTLS connections in the PC

   ❖ All remote tracks created by that RTCPeerConnection - on both sides - will therefore be isolated

❖ Alternative: scope to the track or the DTLS connection

   ❖ Both create protocol-layer challenges, not recommended

Problem
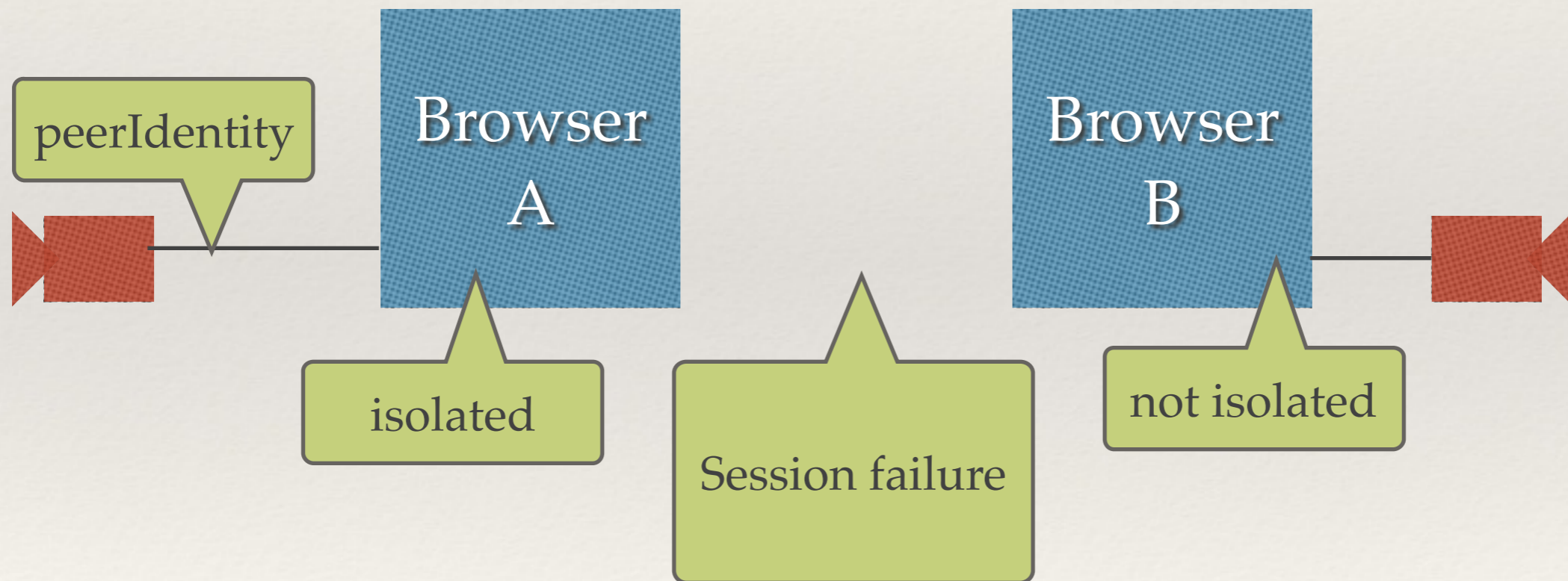
❖ What do we do when tracks aren't all isolated?

❖ Option 1: fail to create a session

❖ Option 2: force all streams on the remote side to become isolated too

Option 1

❖ Fail if there are both isolated and non-isolated tracks

❖ A mismatch causes DTLS to fail to negotiate

Advantages of Option 1

❖ All or nothing: either all tracks are isolated, or all tracks are not isolated

❖ Enables authenticated provenance for media based solely on isolation properties

- ❖ If media is isolated, we can say that it comes from the authenticated peer and no one else

- ❖ Without this, any non-isolated media can't be identified as such at the receiving end

Additional Proposal for Option 1

- Request that the IETF WG create a marker in the SDP that would allow the API to detect a failure

  - …where one side has isolation and the other does not

- If isolation is in the remote SDP and we aren't isolated, either:

  - A) Fail setRemoteDescription (easy)

  - B) Check if local streams can be isolated, and isolate them, otherwise, fail setRemoteDescription (bleargh)

Option 2

- Make all tracks isolated if any track is isolated

- A mismatch permits DTLS to negotiate in isolated mode
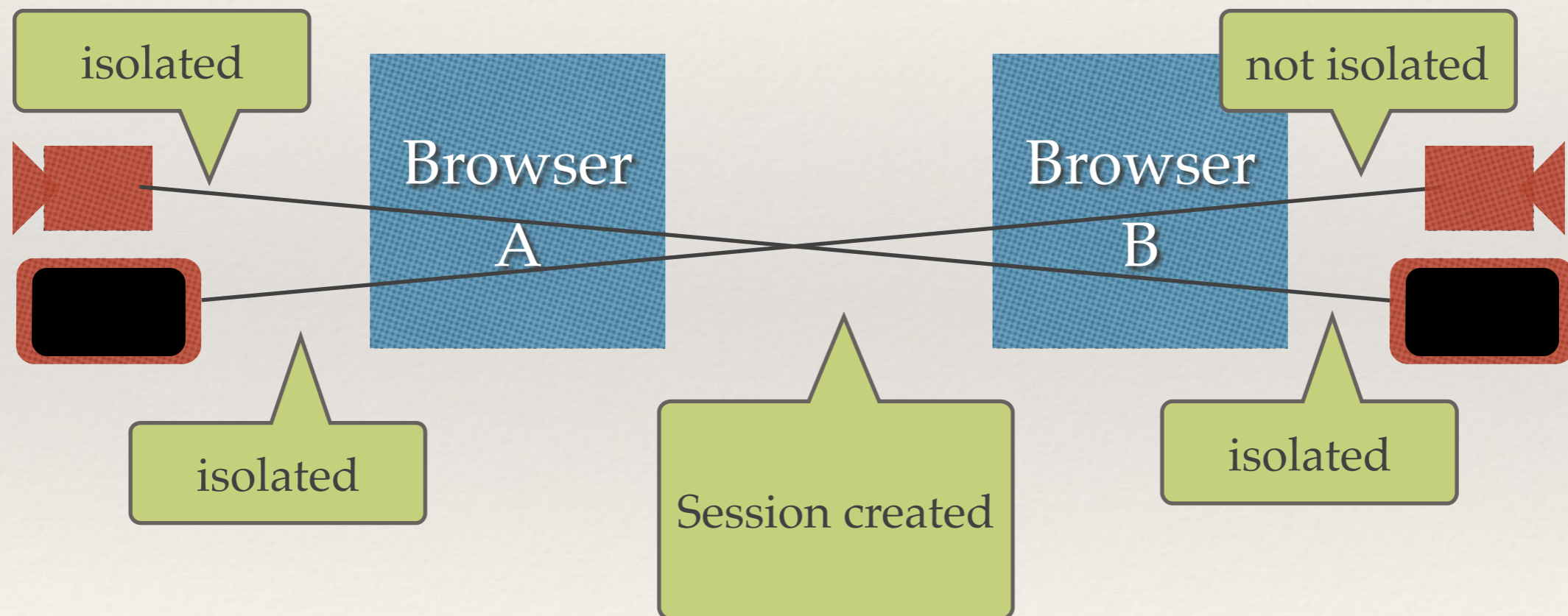
Advantages of Option 2

❖ No failures

Isolation Timing

- Tracks can be added after establishing a session

  - An isolated track, added to a non-isolated RTCPeerConnection MUST send black/silence/null

- Tracks can change isolation properties

  - A track that becomes isolated after RTCPeerConnection is opened MUST send black/silence/null