

# Expressing Source Filters in SDP

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# Why?

- Required for single-source sessions in 232/8
- ~Required for other Include-mode sessions
- Exclusion list useful in some scenarios
  
- Want app getting SDP to be able to translate into API calls (draft-ietf-idmr-msfapi-00.txt)

# Extensibility Mechanisms

- Option A: new address type
  - c= line currently contains address family & group address
- Option B: new attribute
  - a=<attribute>:<value>
  - Receivers ignore a= if not understood
  - (c=,a=)\* prohibited by SDP syntax

# Option A: address type

- Example:
  - `c=IN IP4SF 224.2.17.12/127 excl 1.1.1.1  
2.2.2.2`
- Not backwards compatible
  - Existing SDP receivers can't understand
  - Seems to be problematic for exclude mode

# Option B: attribute

- Example:
  - c=IN IP4 224.2.17.12/127
  - a=**excl**:IN IP4 224.2.17.12 1.1.1.1 2.2.2.2
- Backwards compatible
  - Existing SDP receivers ignore filter, join group
- Result of ignoring unrecognized means legacy receivers may try to join 232/8 groups
  - No big deal?

# Choose one?

- Prefer single mechanism for both include/exclude mode
  - consistency
  - code reuse
- Proposal: option B
  - $a=\{\text{incl,excl}\}:\langle\text{network type}\rangle \langle\text{address type}\rangle$   
 $\langle\text{connection address}\rangle ( \langle\text{source}\rangle )+$

# Example 1: multi-source session, separate group address per source

- c=IN IP4 232.2.17.12/127
- c=IN IP4 232.1.2.3/127
- a=incl:IN IP4 232.2.17.12 1.1.1.1
- a=incl:IN IP4 232.1.2.3 2.2.2.2

## Example 2: multiple address types

- c=IN IP4 224.2.17.12/127
- c=IN IP6 FF0E::11A/127
- a=excl:IN IP4 224.2.17.12 1.1.1.1
- a=excl:IN IP6 FF0E::11A  
2001:210:1:2:240:96ff:fe25:8ec9

# Example 3: multiple groups with same filter

- Example 3a: group range
  - c=IN IP4 224.2.1.1/127/3
  - a=incl:IN IP4 224.2.1.1 1.1.1.1 2.2.2.2
- Example 3b: independent groups, wildcard?
  - c=IN IP4 224.2.1.1/127
  - c=IN IP4 224.2.2.2/63
  - a=incl:IN IP4 \* 1.1.1.1 2.2.2.2

# Limitations with used with SAP

- “The text payload should be no greater than 1 Kbyte in length.”
- 40 bytes per IPv6 address, 16 per IPv4 address
  - assuming ~400 bytes for other stuff, 15 IPv6 source addresses or 39 IPv4 addrs fit w/o compression

# Other source-specific considerations

- Single-source session should have `a=recvonly`
- **CANNOT** assume the reverse