

# CLUE protocol

**draft-presta-clue-protocol-00**

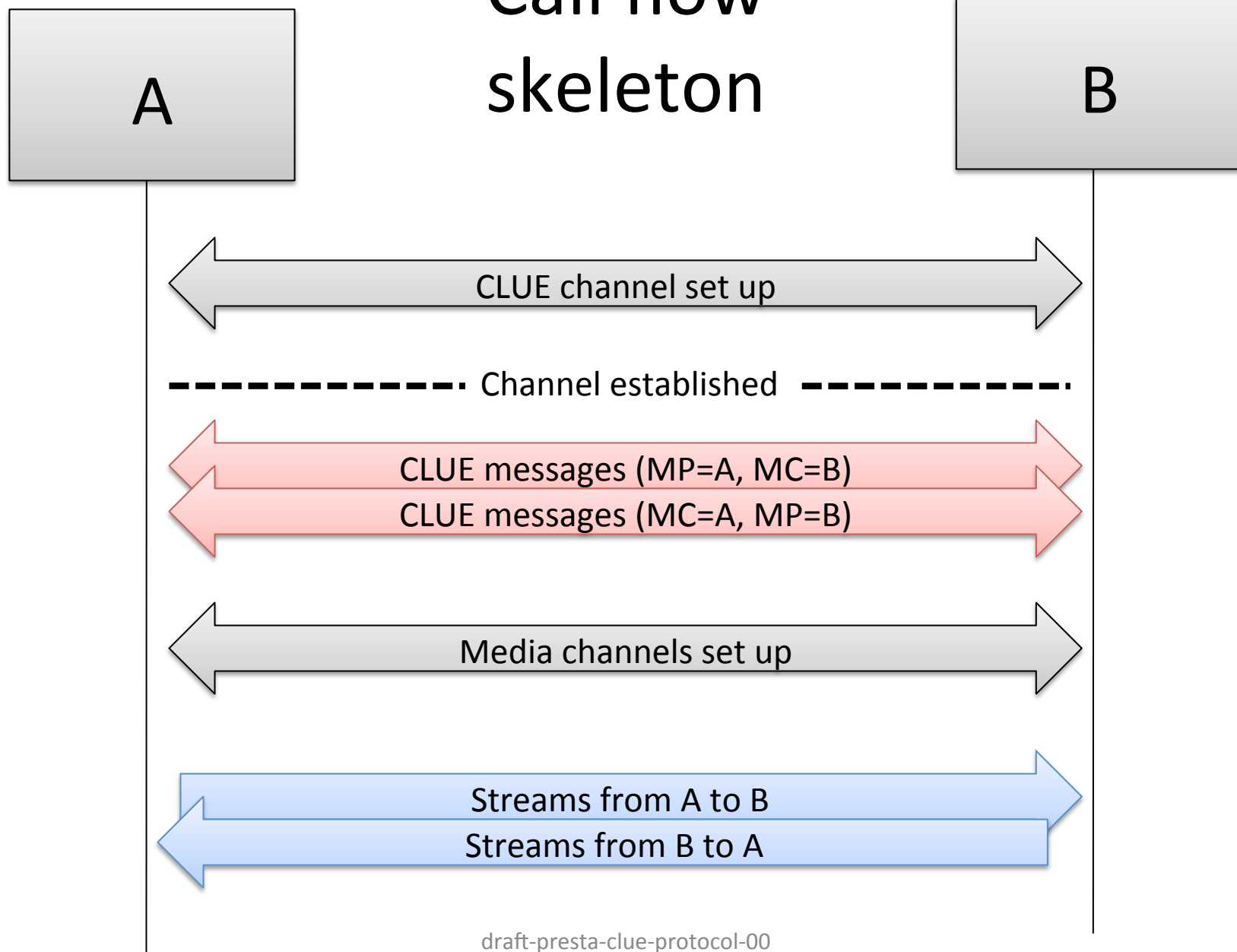
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Roberta Presta  
S.P. Romano

# Protocol overview

- Needed to set up media streams in a CLUE telepresence session
- CLUE protocol messages flow over the CLUE channel
  - A DTLS/SCTP channel is assumed to be already in place
- Stateful, XML-based, client-server protocol
  - Media Provider (the server)
    - Advertises, provides streams
  - Media Consumer (the client)
    - Requests streams

# Call flow skeleton



# Main CLUE messages

- **ADVERTISEMENT**
  - Asynchronously sent by a MP to advertise its telepresence capabilities
- **CONFIGURE**
  - Sent from a MC to a MP to list the desired streams
- **(CONFIGURE) RESPONSE**
  - Sent from a MP to a MC to accept or decline (for any reason) the CONFIGURE request

# Some response codes

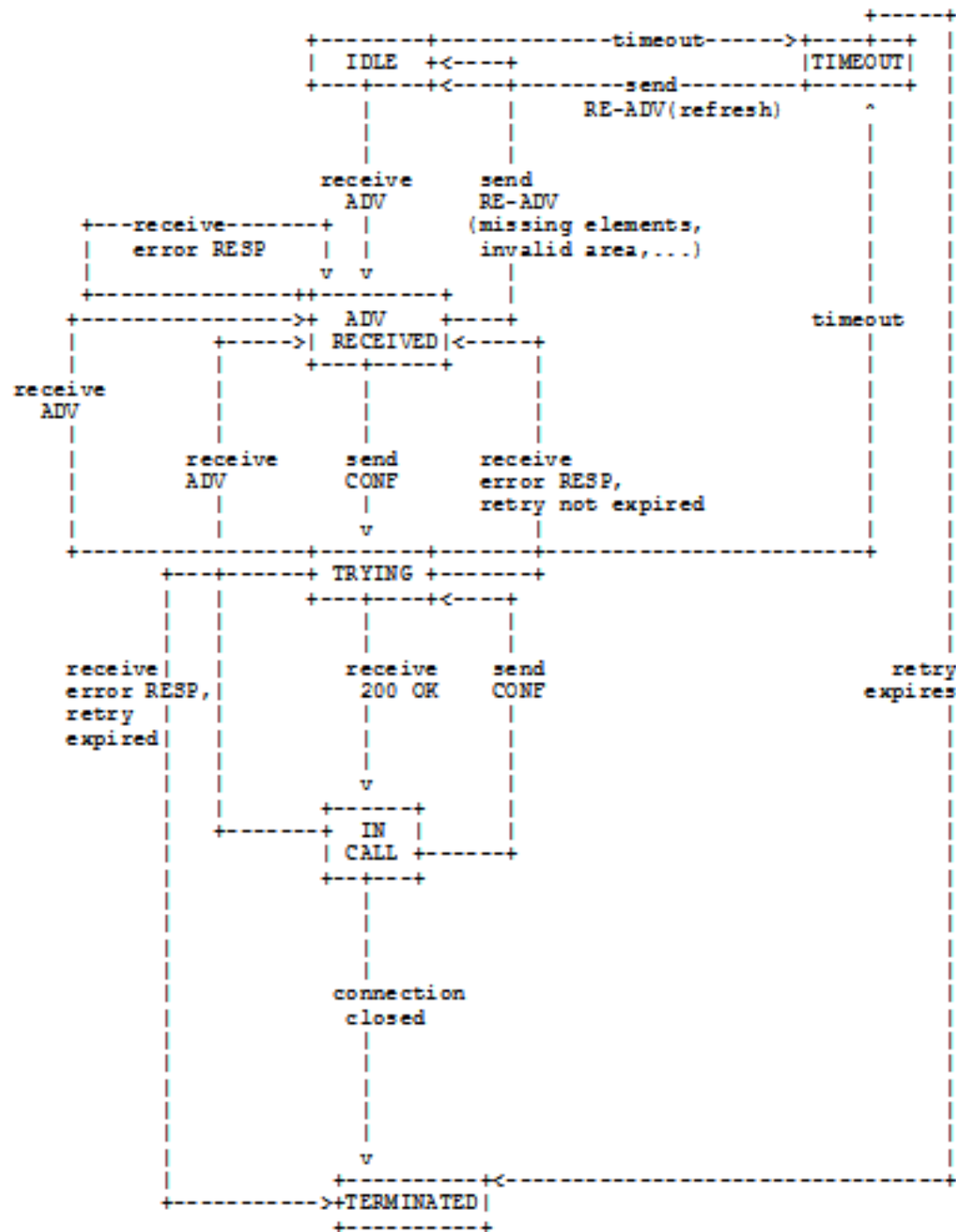
410	Bad syntax	The XML syntax of the CONF message is not correct.
411	Invalid value	The CONF message contains an invalid parameter value.
412	Invalid identifier	The identifier used for requesting a capture is not valid or unknown.
413	Conflicting values	The CONF message contains values that cannot be used together.
420	Invalid sequencing	The sequence number of the CONF message is out of date or corresponds to an obsoleted ADV.
510	Version not supported	The CLUE protocol version of the CONF message is not supported by the MP.
511	Option not supported	The option requested in the CONF message is not supported by the MP.

# Dealing with ADVERTISEMENT errors

- Two main issues to be discussed
  - ADVERTISEMENT does not reach the other party
  - ADVERTISEMENT arrives either with errors or with not supported options/extensions/version
- A temporary solution: READV request
  - Sent from the MC to the MP to request a new (corrected) copy of the ADVERTISEMENT
    - A request field specifies the motivation (e.g., refresh, not supported option/extension/version)
- Question:
  - Does the MC need to request the re-transmission of the ADVERTISEMENT?

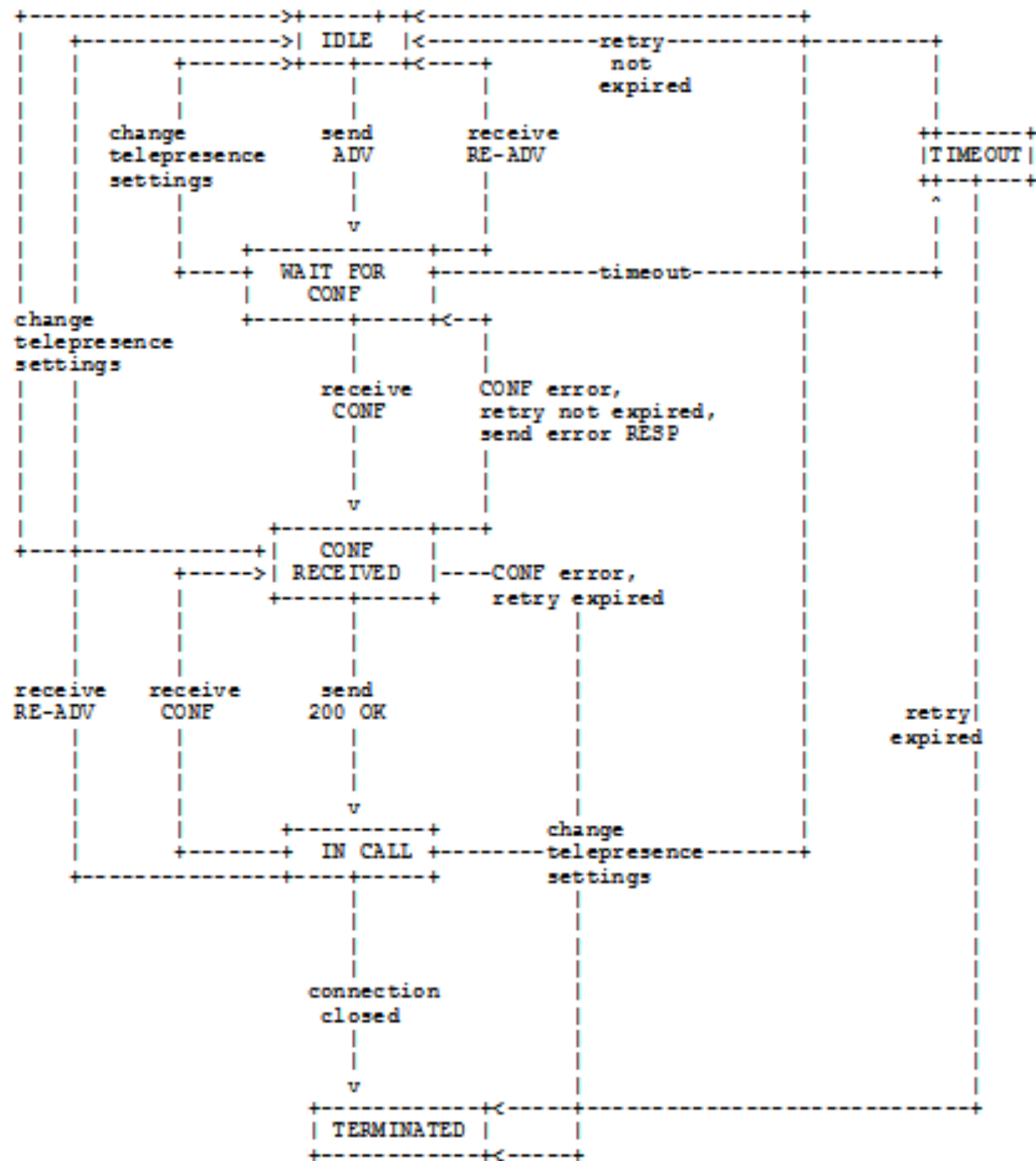
# Alternatives

- Manage ADV errors just with timeouts & retries
  - After a certain # of fired timeouts, the communication is assumed to be not possible
  - Remove READV
- Keep refresh requests clearly distinguished from error notifications



## MC's state machine





## MP's state machine

# Conclusions

- Just a preliminary work
- Needs to be defined in conjunction with both the framework and the signaling drafts
  - A layered approach involving different framework components at different levels
- Feedbacks, comments, contributions, are more than welcome!