# draft-ietf-mboned-ssmping-02.txt

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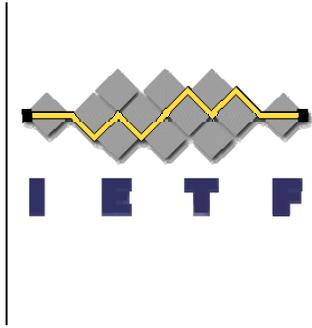
# Rev 02 changes rationale

- Trying to make a generic protocol
  - Unfortunately some added complexity
- Should work in closed networks where clients and servers may be preconfigured with fixed groups or where client is free to choose
- Should work on the open Internet where some servers may be very restrictive
- Implementations should give the server administrator the needed flexibility
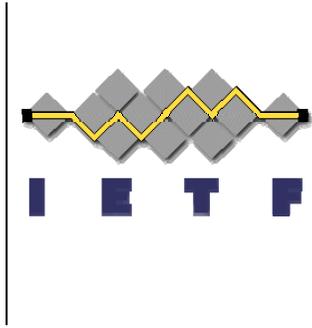
# The main changes

- 2 new message types
- Init message
  - Client sends prefix(es) to server asking for a group
  - No need for standardisation
- Server Response message
  - Server responds with a group to use from one of the prefixes
  - Or, if no group available a message with no group and optionally a list of prefixes
- If the client receives a group it sends ping requests and gets responses mostly as before
- Optionally client can immediately send ping requests with some group – may get a negative Server Response message

# How it works

Client                                                              Server

User runs e.g.
ssmping <S>                    t                                    t

Client sends Init                                  Server receives Init
                                                   Message and sends
Client receives G                                  Server Response with
and joins S,G                                      A group address G
....................................................................................................

Clients sends
unicast to S
                                                   Server receives unicast
                                                   ssmping query

Client receives                                    Responds with ssmping
replies and                                        unicast reply and
prints out RTT etc                                 multicast reply to G
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New query every
second
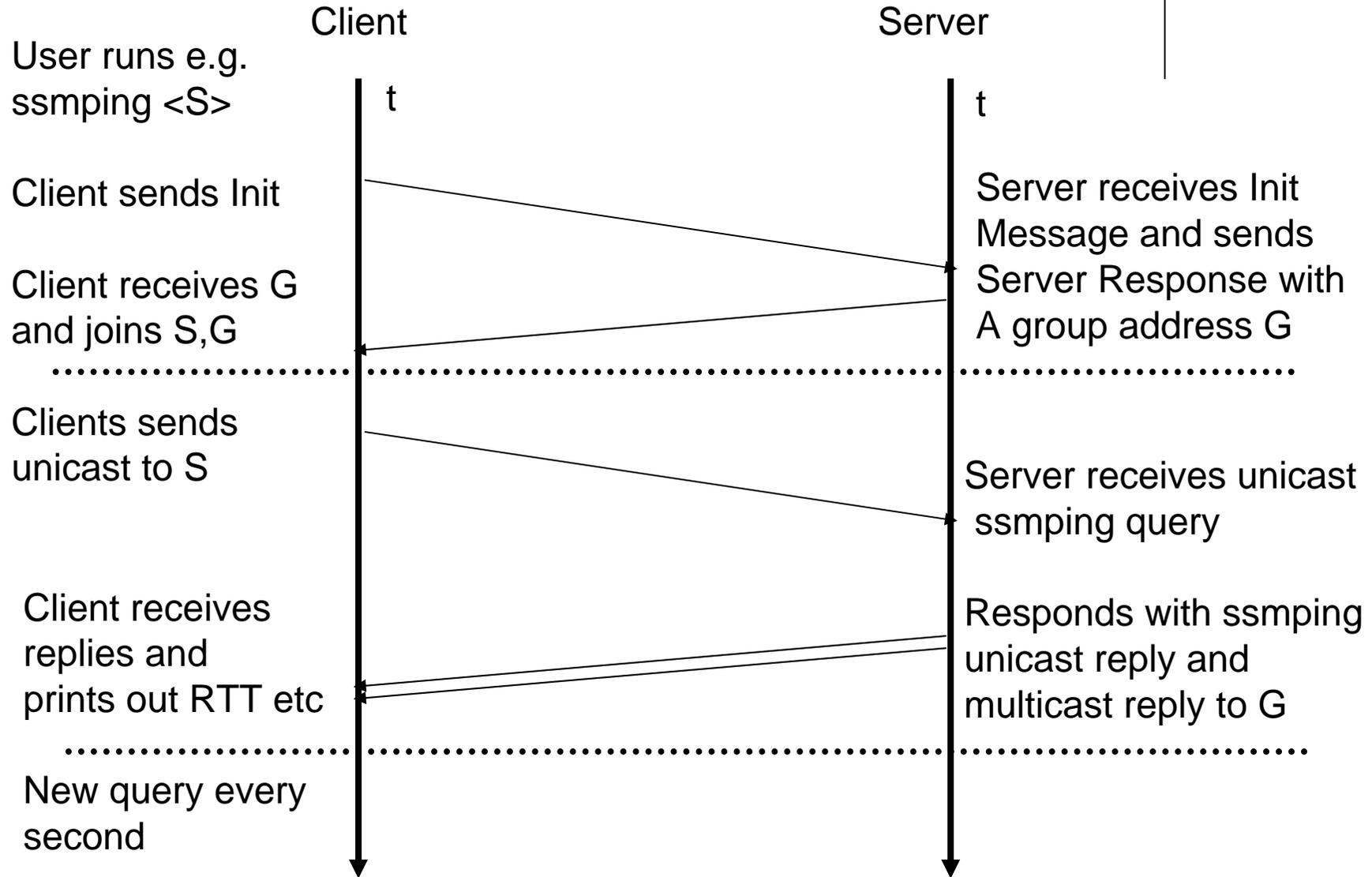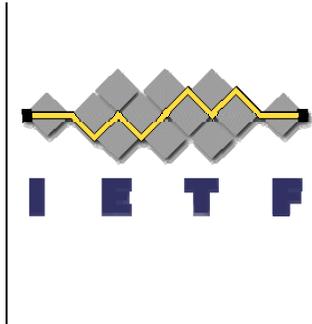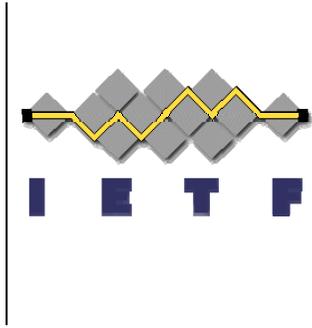
# Init message

- Contains prefix(es)
  - Might be 0/0 or a.b.c.d/32 etc
  - Depending on the client implementation the user may be able to specify scope, group range or exact group
    - Or RP address for embedded-RP
  - Prefix(es) are in prioritised order

# Server Response message
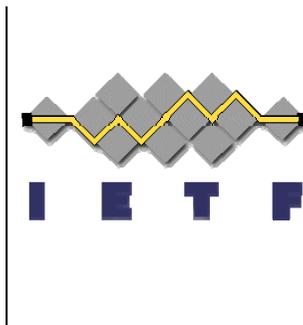
- Mostly used in response to Init
  - May also be used as a decline message when receiving Ping Request
- A positive response to Init contains a group address
  - Left to the server whether the group is unique or shared
  - May also contain a Session ID for use in later messages
- A negative response/decline message has no group address
  - But it may contain prefix(es)
  - Client may use those to provide a hint to the user if what groups/ranges may be available
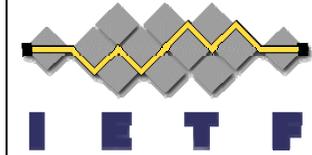
# Ping Request message

- Now always contains a group address
  - May be sent without a prior Init
  - Server may send a Server Response if does not like group address or don't want to serve
- Contains a Session ID if one was received in the previous server response

# Ping Response message

- Contains TTL option showing the TTL used when messages are originated
- May contain a Session ID
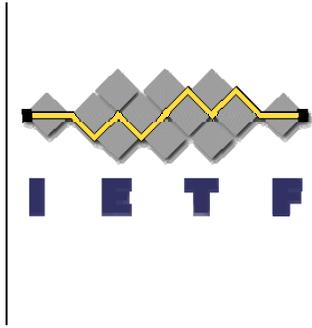
# Next steps

- The protocol may need a new name
  - Nothing restricts it to SSM
  - Client may choose an ASM or SSM range and choose whether to join G or (S,G)
- As far as I'm concerned the work is done
- Does anyone have needs not addressed or any concerns with the protocol as specified?
- Need wg review to see what I've missed
  - Need volunteers to review
- Previous revision based on actual implementation and deployment. Will now implement rev 02