

# A Taxonomy of Grouping Semantics for RTP Sources

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taxonomy-00

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Jonathan Lennox [jonathan@vidyo.com](mailto:jonathan@vidyo.com)

Kevin Gross [kevin.gross@avanw.com](mailto:kevin.gross@avanw.com)

*Your name here!*

# Background

- At the Atlanta IETF, discussion of the SRCNAME draft ratholed on confusion on several topics:
  - What a “source” is
  - What terms to use for various concepts in RTP
- We had an ad-hoc breakout meeting afterwards to discuss these issues
- This document is a result of that discussion
  - Didn’t have as many contributions as I’d hoped...
- We also had a breakout this Monday

# Naming and Definitions

- This draft tries to:
  - Come up with good names for important concepts
  - Come up with precise definitions for them
  - Still a lot of work to do
    - Most of the names are tentative.
    - Suggestions welcome – but not at the mic, please!
- Issues with naming:
  - A lot of terms are already used, in contradictory ways.
    - “Stream” is the worst offender here

# Basic Concepts (1): Synchronization Source

- Synchronization Source
  - “the source of a stream of RTP packets, identified by a 32-bit numeric SSRC identifier carried in the RTP header.”
  - Most commonly, a single flow of encoded media, for a single decoding process.
  - Can also be used for repair flows, sub-flows of a layered encoding, etc.

# Basic Concepts (2): Sessions

- RTP Session
  - A communications channel among a group of participants communicating via RTP
- Multimedia Session
  - A group of concurrent, associated RTP sessions

# Basic Concepts (3): Media Source Output

- Media Source Output
  - A unique piece of media that can be rendered to a human
  - Can be available in multiple formats, but intended to provide the same experience, modulo quality.
  - Can be composed of several synchronization sources, possibly in different RTP sessions (always the same multimedia session).
  - Probably maps to a CLUE Capture (or Encoding?) or a WebRTC RtcMediaStreamTrack (or its source?).
  - (Called Media Source in the draft; the term Media Source Output was suggested on Monday.)

# Group relationship types

- Relationships among media sources
  - Synchronization contexts (identified by CNAME)
  - CLUE Scenes (and their substructures)
  - WebRTC MediaStreams
  - Clock source
- Alternative representations of media sources
  - Simulcast
  - Multi-Stream Transmission (MST) of Layered Codecs
- Robustness and Repair
  - Forward Error Correction
  - Retransmission

# Path forward

- We need good names and definitions for concepts
- We may need more concepts defined
- We need to know where to discuss this work
  - rai area mailing list?
- We need more contributors!