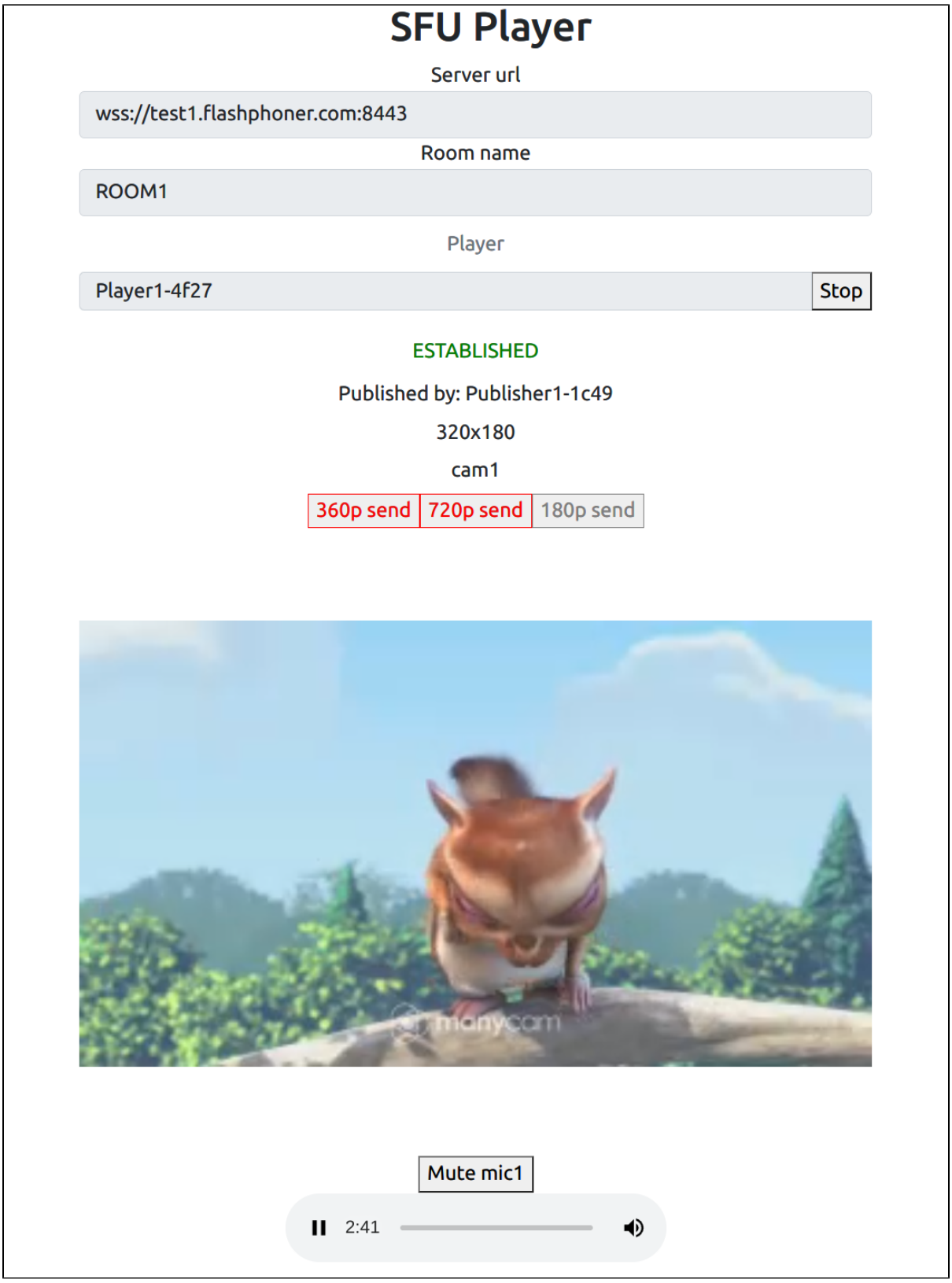
Audio/video tracks identification

Since build 2.0.186 there is the examples how to identify a published audio/video tracks.

On the screenshot below, the track names `mic1` for audio and `cam1` for video tracks are displayed in SFU Player example



Analyzing example code

Let's review SFU SDK examples source code available on GitHub with tag 8287dd9.

1. Track types setting in `config.json` file

audio track type code

```
{
  ...,
  "media": {
    "audio": {
      "tracks": [{
        "source": "mic",
        "channels": 2,
        "type": "mic1"
      }]
    },
    ...
  }
}
```

video track type code

```
{
  ...,
  "media": {
    ...
    "video": {
      "tracks": [
        {
          "source": "camera",
          "width": 1280,
          "height": 720,
          "codec": "H264",
          ...,
          "type": "cam1"
        }
      ]
    }
  }
}
```

2. Adding track types to WebRTC configuration object before publishing

`Room.join` code

```
            let streams = await getVideoStreams(mainConfig);
            let audioStreams = await getAudioStreams(mainConfig);
            if (state.isConnected() && state.isActive()) {
                //combine local video streams with audio streams
                streams.push.apply(streams, audioStreams);
                let config = {};
                //add our local streams to the room (to PeerConnection)
                streams.forEach(function (s) {
                    let contentType = s.type || s.source;
                    //add local stream to local display
                    localDisplay.add(s.stream.id, $("#" + state.inputId()).val(), s.stream, contentType);
                    //add each track to PeerConnection
                    s.stream.getTracks().forEach((track) => {
                        config[track.id] = contentType;
                        addTrackToPeerConnection(state.pc, s.stream, track, s.encodings);
                        subscribeTrackToEndedEvent(state.room, track, state.pc);
                    });
                });
                //start WebRTC negotiation
                state.waitFor(state.room.join(state.pc, null, config), MAX_AWAIT_MS);
            }
```

3. Receiving ADD_TRACKS event at player side

`SFU_ROOM_EVENT.ADD_TRACKS`, `setTrackInfo()` code

```
    room.on(constants.SFU_ROOM_EVENT.ADD_TRACKS, function(e) {
        console.log("Received ADD_TRACKS");
        ...
        for (const pTrack of e.info.info) {
            let createDisplay = true;
            for (let i = 0; i < participant.displays.length; i++) {
                let display = participant.displays[i];
                if (pTrack.type === "VIDEO") {
                    if (display.hasVideo()) {
                        continue;
                    }
                    display.videoMid = pTrack.mid;
                    display.setTrackInfo(pTrack);
                    createDisplay = false;
                    break;
                } else if (pTrack.type === "AUDIO") {
                    if (display.hasAudio()) {
                        continue;
                    }
                    display.audioMid = pTrack.mid;
                    display.setTrackInfo(pTrack);
                    createDisplay = false;
                    break;
                }
            }
            if (!createDisplay) {
                continue;
            }
            let display = createRemoteDisplay(participant.nickName, participant.nickName, mainDiv,
displayOptions);
            participant.displays.push(display);
            if (pTrack.type === "VIDEO") {
                display.videoMid = pTrack.mid;
                display.setTrackInfo(pTrack);
            } else if (pTrack.type === "AUDIO") {
                display.audioMid = pTrack.mid;
                display.setTrackInfo(pTrack);
            }
        }
    })...;
```

4. Track indentifier displaying

`AddRemoveTracks.info.info.contentType` , `setTrackInfo()` code

```
            setTrackInfo: function(trackInfo) {
                if (trackInfo) {
                    ...
                    if (trackInfo.type) {
                        contentType = trackInfo.contentType || "";
                        if (trackInfo.type == "VIDEO" && displayOptions.type && contentType !== "") {
                            showItem(videoTypeDisplay);
                            videoTypeDisplay.innerHTML = contentType;
                        }
                        if (trackInfo.type == "AUDIO") {
                            audioStateButton.setContentType(contentType);
                        }
                    }
                }
            },
            ...
```