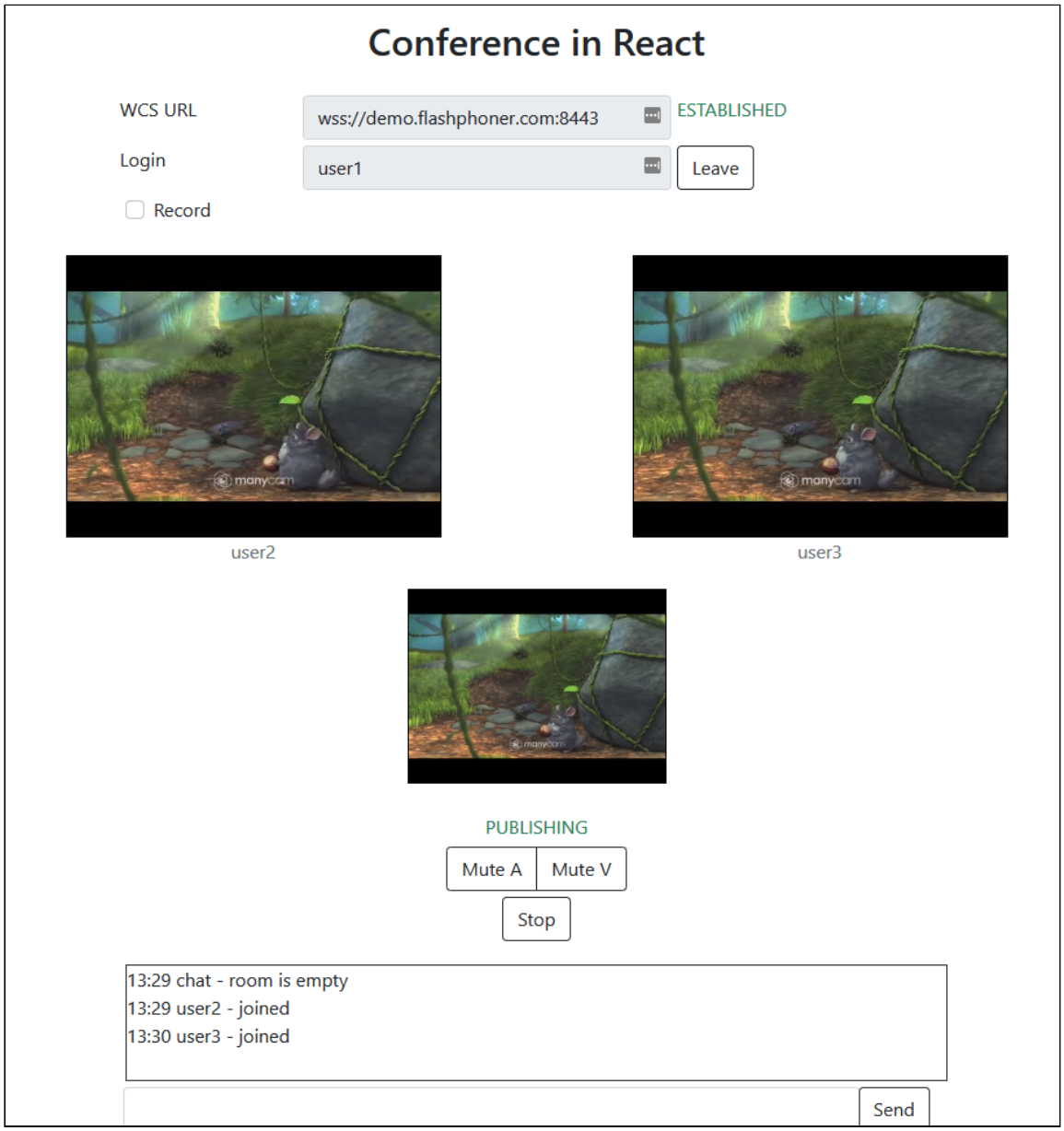
Conference React

Описание

Приложение Conference React показывает пример использования Web SDK и RoomApi в React приложении для публикации и проигрывания WebRTC потоков в чат-комнате



Проект доступен на GitHub, а также в архивах сборок Web SDK по следующему пути examples/react/conference-react, начиная со сборки 2.0.201.

Сборка проекта

1. Загрузите исходные тексты WebSDK

```
git clone https://github.com/flashphoner/flashphoner_client.git
```

2. Перейдите в каталог примера

```
cd flashphoner_client/examples/react/conference-react
```

3. Установите зависимости

```
npm install
```

4. Запустите сборку для локального тестирования

```
npm start
```

или для выгрузки на свой веб-сервер

```
npm run build
```

Работа с кодом примера

Для разбора исходного кода примера возьмем версию с хэшем `456b1c7`, которая доступна здесь

Код приложения расположен в файле ConferenceApp.js, дополнительные функции в файле fp-utils.js

1. Импорт API

code

```
import * as Flashphoner from '@flashphoner/websdk/src/flashphoner-core.js';
import * as RoomApi from '@flashphoner/websdk/src/room-module.js';
import * as FPUtils from './fp-utils.js';
```

2. Инициализация API

`Flashphoner.init()` code

```
componentDidMount() {
  ...
  try {
    Flashphoner.init({});
    ...
  }
  catch(e) {
    console.log(e);
    ...
  }
}
```

3. Установка соединения с сервером, получение события, подтверждающего установку соединения

`RoomApi.connect()`, `SESSION_STATUS.ESTABLISHED` code

```
createConnection = (url, username) => {
 let app = this;
 let session = this.state.session;

 if (session && session.status() === SESSION_STATUS.ESTABLISHED) {
   ...
 } else {
   console.log("Create new RoomApi session with url " + url + ", login " +
username);
   app.setState({joinButtonDisabled: true, serverUrlDisabled: true});
   RoomApi.connect({urlServer: url, username:
username}).on(SESSION_STATUS.ESTABLISHED, (session) => {
     app.setState({session: session, sessionStatus:
SESSION_STATUS.ESTABLISHED, sessionStatusClass: 'text-success'});
     app.joinRoom(session);
   }).on(SESSION_STATUS.DISCONNECTED, () => {
     ...
   }).on(SESSION_STATUS.FAILED, () => {
     ...
   });
 }
}
```

4. Вход участника в комнату, получение текущего состояния комнаты

`Session.join()`, `ROOM_EVENT.STATE` code

Функции `join()` передаются параметры:

- имя комнаты
- признак записи потоков в комнате в один файл

```
joinRoom = (session) => {
let app = this;
```

```
let roomName = this.getRoomName();
let record = this.state.record;

console.log("Join the room " + roomName + ", record " + record);
session.join({name: roomName, record: record}).on(ROOM_EVENT.STATE, (room) =>
{
  let roomParticipants = room.getParticipants();
  let participantsNumber = roomParticipants.length;
  console.log("Current number of participants in the room: " +
participantsNumber);
  if (roomParticipants.length >= maxParticipants) {
      console.warn("Current room is full");
      app.setState({sessionFailedInfo: "Current room is full"});
      room.leave().then(() => {app.onLeft();}, () => {app.onLeft();});
      return false;
  }
  app.setInviteUrl(roomName);
  if (participantsNumber > 0) {
    let chatState = "participants: ";
    for (let i = 0; i < participantsNumber; i++) {
        app.installParticipant(roomParticipants[i]);
        chatState += roomParticipants[i].name();
        if (i < participantsNumber - 1) {
            chatState += ",";
        }
    }
    app.addMessage("chat", chatState);
  } else {
    app.addMessage("chat", " room is empty");
  }
  ...
  app.publishLocalMedia(room);
  app.onJoined(room);
  ...
});
}
```

5. Публикация потока в комнате

`Room.publish()` code

```
publishLocalMedia = (room) => {
let app = this;
let constraints = {
    audio: true,
    video: true
};
let display = document.getElementById("localDisplay");

app.setState({publishButtonDisabled: true});
room.publish({
    display: display,
    constraints: constraints,
    record: false,
    receiveVideo: false,
```

```
    receiveAudio: false
    ...
});
}
```

6. Получение сообщения, подтверждающего публикацию

`STREAM_STATUS.PUBLISHING` code

```
publishLocalMedia = (room) => {
...
room.publish({
    display: display,
    constraints: constraints,
    record: false,
    receiveVideo: false,
    receiveAudio: false
}).on(STREAM_STATUS.FAILED, (stream) => {
    ...
}).on(STREAM_STATUS.PUBLISHING, (stream) => {
    app.setState({publishStatus: STREAM_STATUS.PUBLISHING,
publishStatusClass: 'text-success'});
    app.onMediaPublished(stream);
}).on(STREAM_STATUS.UNPUBLISHED, (stream) => {
    ...
});
}
```

7. Получение события о присоединении участника к комнате

`ROOM_EVENT.JOINED` code

```
joinRoom = (session) => {
let app = this;
let roomName = this.getRoomName();
let record = this.state.record;

console.log("Join the room " + roomName + ", record " + record);
session.join({name: roomName, record: record}).on(ROOM_EVENT.STATE, (room) =>
{
  ...
}).on(ROOM_EVENT.JOINED, (participant) => {
  app.installParticipant(participant);
  app.addMessage(participant.name(), "joined");
}).on(ROOM_EVENT.LEFT, function(participant) {
  ...
}).on(ROOM_EVENT.PUBLISHED, (participant) => {
  ...
}).on(ROOM_EVENT.FAILED, (room, info) => {
  ...
}).on(ROOM_EVENT.MESSAGE, (message) => {
  ...
```

```
});
}
```

8. Получение события о публикации потока участником

`ROOM_EVENT.PUBLISHED` code

```
joinRoom = (session) => {
let app = this;
let roomName = this.getRoomName();
let record = this.state.record;

console.log("Join the room " + roomName + ", record " + record);
session.join({name: roomName, record: record}).on(ROOM_EVENT.STATE, (room) =>
{
  ...
}).on(ROOM_EVENT.JOINED, (participant) => {
  ...
}).on(ROOM_EVENT.LEFT, function(participant) {
  ...
}).on(ROOM_EVENT.PUBLISHED, (participant) => {
  app.playParticipantsStream(participant);
}).on(ROOM_EVENT.FAILED, (room, info) => {
  ...
}).on(ROOM_EVENT.MESSAGE, (message) => {
  ...
});
}
```

9. Воспроизведение потока участника, изменение размеров картинки под `div` элемент

`Stream.play()`, `STREAM_STATUS_PLAYING`, `FPUtils.resizeVideo()` code

```
playStream = (stream, remoteVideo, name) => {
let app = this;
let participantStream = null;

participantStream = stream.play(remoteVideo).on(STREAM_STATUS.PLAYING,
(playingStream) => {
  let video = document.getElementById(playingStream.id());
  if (video) {
    video.addEventListener('resize', (event) => {
      FPUtils.resizeVideo(event.target);
    });
  }
});
app.setParticipantStream(name, participantStream);
}
```

10. Отправка сообщения участникам

`Participant.sendMessage()` code

```
onSendClick = () => {
let session = this.state.session;
let room = this.state.room;
let message = this.state.message;

if (session && room) {
  let participants = room.getParticipants();
  this.addMessage(session.username(), message);
  for (let i = 0; i < participants.length; i++) {
      participants[i].sendMessage(encodeURIComponent(message));
  }
  this.setState({message: ''});
}
}
```

11. Получение сообщения от другого участника

`ROOM_EVENT.MESSAGE` code

```
joinRoom = (session) => {
let app = this;
let roomName = this.getRoomName();
let record = this.state.record;

console.log("Join the room " + roomName + ", record " + record);
session.join({name: roomName, record: record}).on(ROOM_EVENT.STATE, (room) =>
{
  ...
}).on(ROOM_EVENT.JOINED, (participant) => {
  ...
}).on(ROOM_EVENT.LEFT, function(participant) {
  ...
}).on(ROOM_EVENT.PUBLISHED, (participant) => {
  ...
}).on(ROOM_EVENT.FAILED, (room, info) => {
  ...
}).on(ROOM_EVENT.MESSAGE, (message) => {
  if (message.from && message.text) {
    app.addMessage(message.from.name(), decodeURIComponent(message.text));
  }
});
}
```

12. Получение сообщения о выходе другого участника из комнаты

`ROOM_EVENT.LEFT` code

```
joinRoom = (session) => {
let app = this;
let roomName = this.getRoomName();
```

```
let record = this.state.record;

console.log("Join the room " + roomName + ", record " + record);
session.join({name: roomName, record: record}).on(ROOM_EVENT.STATE, (room) =>
{
  ...
}).on(ROOM_EVENT.JOINED, (participant) => {
  ...
}).on(ROOM_EVENT.LEFT, function(participant) {
  app.removeParticipant(participant);
  app.addMessage(participant.name(), "left");
}).on(ROOM_EVENT.PUBLISHED, (participant) => {
  ...
}).on(ROOM_EVENT.FAILED, (room, info) => {
  ...
}).on(ROOM_EVENT.MESSAGE, (message) => {
  ...
});
}
```

13. Остановка публикации потока

`Stream.stop()` code

```
onPublishClick = () => {
let stream = this.state.publishStream;
let room = this.state.room;

if (!room) return;
this.setState({publishButtonDisabled: true});
if (!stream) {
  this.publishLocalMedia(room);
} else {
  stream.stop();
}
};
```

14. Выход участника из комнаты

`Room.leave()` code

```
onJoinClick = () => {
let app = this;
...
let room = this.state.room;
let participants = this.state.participants;

if (!room) {
  ...
} else {
  this.setState({joinButtonDisabled: true}, () => {
    participants.forEach((participant) => {
      // Stop all the playing participants streams
```

```
      app.stopParticipantStream(participant.stream);
    });
    room.leave().then(() => {app.onLeft();}, () => {app.onLeft();});
  });
}
};
```