

1. signal processing to remove ambient noise from the audio or video  
Two connect two webRTC the first step is signal processing. Peer connection in the browser are established by server to ensure all peers agree to section. The server signal of both peers to determine what media format to use and what each peer want to send to the other. Background noise removal is the ability to enhance a noisy speech signal by isolating the domain sound.

2. code handling to compress and decompress the audio & video

One of the main feature that, why many people start to use webRTC, is for video streaming. As live video become more mainstream and starts getting higher quality, it requires data transfer to be faster or the packet size to be smaller to be easily transferred. This is why video codec take place to compress and decompress the audio or video. It helps video stream quicker and more apparent. The main feature is to cancel packet loss and clean up noisy images, as well as capture and playback capabilities across multiple platform.

3. Routing from one peer to another through firewall (NATs) and relays to create a bi-directional connection establishment

When an endpoint is behind a NAT/Firewall, it can only identify its local IP address, and the other cannot connect to the local IP because of the firewall security. The end point will ask help from the STUN server to provide its public IP address and a type of NAT. The other end point can attempt the connection btw two using the given public IP address. If successful



media will flow directly to each end point without a 3rd party or another server.

4. User data is encrypted before transmitting across connections.

Data is encrypted before it transmits over the connection. Encrypted data is formatted by using an encrypted algorithm & an encrypted key. It is an extension of Real-Time Transport protocol which does not have any built-in security mechanism. Add Protection Integrity & message authentication to RTP.

5. Managing bandwidth to the user what each peer has to give

In peer-to-peer communication where they share contents such as audio & video file. Because of peer-to-peer communication relies on storage & delivery by the PCs of the user themselves. It contains an analysis of mechanism of various layers of peer-to-peer spectrum from the protocol layer to community layer.