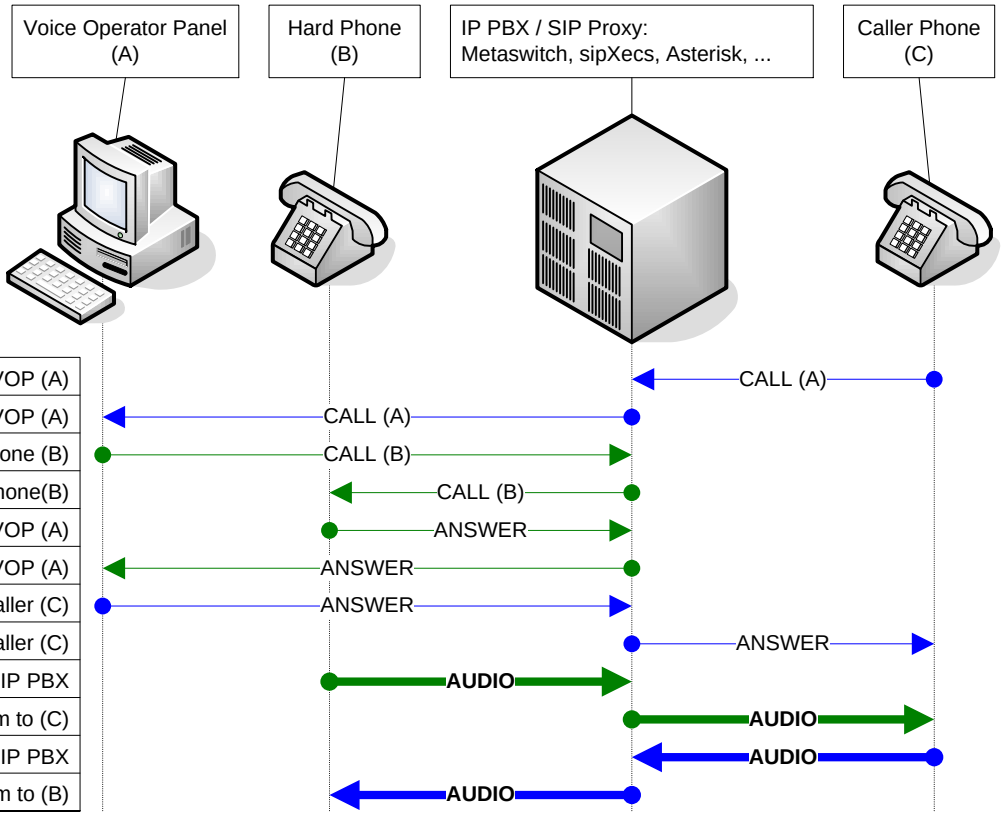
Hardphone Mode

In this mode VOP only handles call control traffic to connect the Caller and the Hard Phone together so the audio stream flows directly between them.

In this mode the IP PBX must obey to the IP/Port of the SDP in the packets. If NAT is involved, SIP ALG must be disabled at the router and sometimes NAT must be disabled at the IP PBX.

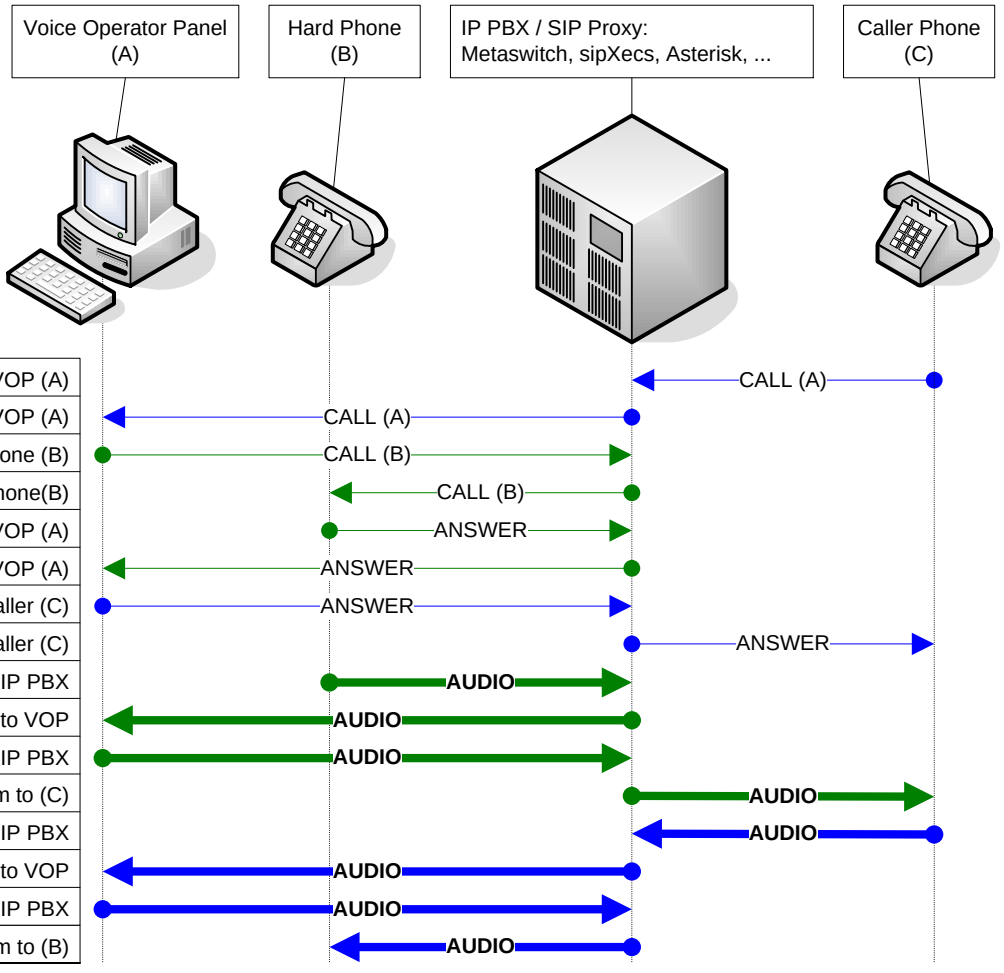


The Caller (C) calls VOP (A)
The IP PBX forwards the call to VOP (A)
VOP (A) calls the Hard Phone (B)
The IP PBX forwards the call to the Hard Phone(B)
The Hard Phone (B) answers VOP (A)
The IP PBX forwards the answer to VOP (A)
VOP (A) answers the Caller (C)
The IP PBX forwards the answer to the Caller (C)
The audio stream from (B) is sent to the IP PBX
The IP PBX forwards the audio stream to (C)
The audio stream from (C) is sent to the IP PBX
The IP PBX forwards the audio stream to (B)

Hardphone Bridge Mode

In this mode VOP handles the call control and the audio streams traffic acting like a bridge between the Caller and the Hard Phone.

This mode produces more audio streams but doesn't require any modification if NAT is involved.

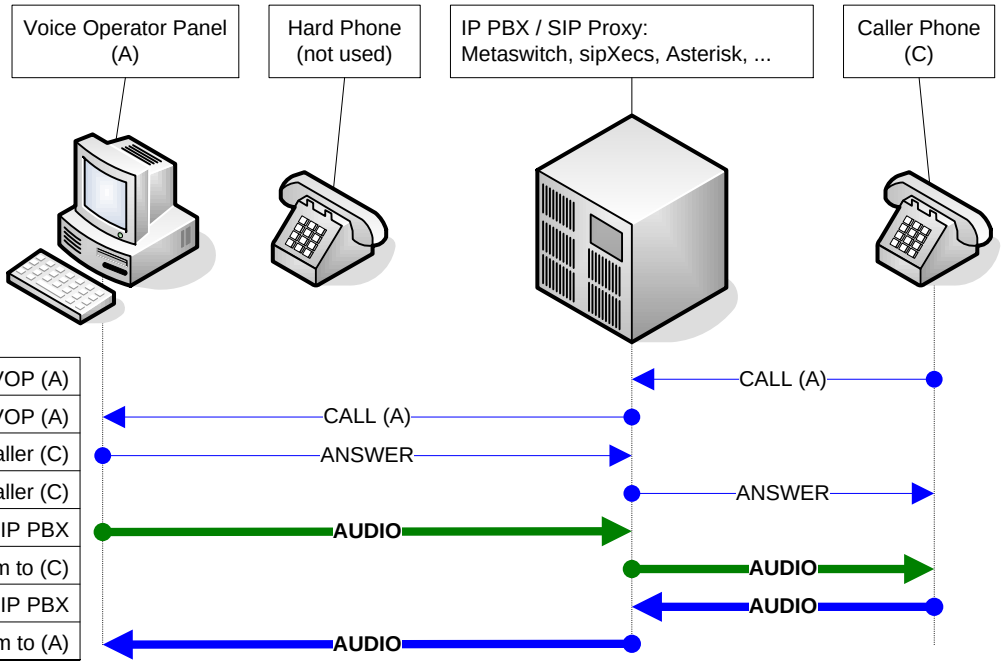


The Caller (C) calls VOP (A)
The IP PBX forwards the call to VOP (A)
VOP (A) calls the Hard Phone (B)
The IP PBX forwards the call to the Hard Phone(B)
The Hard Phone (B) answers VOP (A)
The IP PBX forwards the answer to VOP (A)
VOP (A) answers the Caller (C)
The IP PBX forwards the answer to the Caller (C)
The audio stream from (B) is sent to the IP PBX
The IP PBX forwards the audio stream to VOP
VOP forwards the audio stream to the IP PBX
The IP PBX forwards the audio stream to (C)
The audio stream from (C) is sent to the IP PBX
The IP PBX forwards the audio stream to VOP
VOP forwards the audio stream to the IP PBX
The IP PBX forwards the audio stream to (B)

Softphone Mode

In this mode VOP handles call control and audio streams traffic on its own and thus doesn't require the use of a Hard Phone but instead a headset connected to the computer.

This mode doesn't produces extra audio streams and doesn't require any modification if NAT is involved.



The most efficient mode depends on the topology of your network and the related restrictions:

Hardphone Mode

This mode is the most efficient mode if your IP PBX resides on your local network or if NAT is not involved or if you can disable SIP ALG at the router and NAT at the IP PBX if required.

If you have one data network and one voice network, this is also the most efficient mode because any computer connected to the data network can be used to run VOP. The application will use the data network to control the calls but the audio streams will always flow within the voice network.

To use this mode configure the hardphone number using the <operator> parameter or within the application by entering its number in: Settings > Operator > Operator phone number.

Hardphone Bridge Mode

This mode is used if you have a network topology with NAT involved and you are unable to disable SIP ALG at the router or NAT at the IP PBX.

In this mode, VOP acts like a bridge and creates extra audio streams between VOP, the Hard Phone and the calls.

If you have one data network, which hosts the computer running VOP, and one voice network the audio streams will also flow within your data network which could lead into degradation of the audio performance depending on the quality of your data network.

To use this mode configure the hardphone number using the <operator> parameter or within the application by entering its number in: Settings > Operator > Operator phone number.

And enable the bridge mode by using the <bridge> parameter or within the application by checking "Bridge mode" in: Settings >Operator.

Softphone Mode

This mode is used if you don't want to use a Hard Phone.

In this mode, VOP acts like a softphone and handles audio streams on its own. The Hard Phone is not used anymore and is replaced by a headset connected to the computer running the application.

If you have one data network and one voice network the audio streams will only flow within your data network, but since it uses twice less streams than the hardphone bridge mode, it will less suffer from the quality of your data network.

To use this mode leave the parameter <operator> empty or within the application leave the field "Operator phone number" empty in: Settings > Operator.

And select the input/output/speaker sound devices within the application in: Settings > Softphone.