

Wi-Fi Interpretation System

ABELON

Wi-Fi Interpretation System

- The sound doesn't cut off
- Prevention of wiretapping
- Low latency
- High-Resolution Audio



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To date, simultaneous interpretation systems . . .

have required high initial investment and labor to carry and install the translation equipment. There had to be a person who can take care of rental, management and maintenance of receivers, and time and cost was required for repair. Users might have suffered from noise or low quality sound which cuts off, and from earpieces which don't fit in ears. Furthermore, they had to rent and return a receiver.



A new proposal!

Wi-Fi Interpretation System
ABELON

The simultaneous interpretation system works only by installing the ABELON server on your PC. Participants can use smartphones or tablets to listen to the simultaneous translation through Wi-Fi routers.

Low initial investment costs

You can use either off-the-shelf PCs or Wi-Fi routers, which doesn't require higher investment. ABELON can be introduced by subscription (fixed price per year), which makes it easy to increase or decrease the number of clients depending on business size.

Easy maintenance

When failure occurs, the replacement can be easily prepared because PC-like commonly used equipment is used. Anybody can easily handle the device because windows, iOS or Android is used.

Light weight and compact size

Light weight and compact size makes it easy to move, install and organize the equipment. You can take it with you on the plane as checked baggage.

No need to rent or return a receiver

Participants can use their own smartphones or tablets as receivers, so they don't need to bother to rent or return a receiver. Risks of losing or someone stealing a receiver can be reduced.

High sound quality

The system is equipped with the standard compressor and equalizer and ASIO is used for the audio input and output. There is no need to access the internet and low latency is realized. You can run the device completely in a local environment! The latency, which used to be 15 to 30 sec. like that of the internet live streaming, is reduced to 0.1 to 1.0 sec. You only need to access the internet when you purchase, renew and download an application.

The industry's first! 3 new functions
High resolution audio, prevention of audio skipping and wiretapping

Hi-Res **AUDIO**



High-resolution and high quality voice can be transmitted!

The bit-rate of ABELON can transmit the high resolution audio from 10kbps to 4,608kbps! Even if a session continues for a long time, ears will not get tired, and translators' voice can be clearly heard. The built-in music player makes it possible to play the BGM during an interval.

The probability sound cuts off was reduced to less than 0.5%(1)!

Thanks to technologies and know-how of more than 30 years, ASAT, ABELON Stable Audio Technology, the algorithm that makes it possible to improve, retransmit and synchronize voice data, was successfully developed. The voice cutting problem which used to reach a percentage of two digits will be significantly lowered and it will become possible to send the data of high voice quality to participants in a stable manner. Now, there's no need to worry about missing translation or sound skipping.

Prevention of wiretapping!

Security protocols for Wi-Fi routers, including TKIP, AES, WPA-AES, SSID Stealth, Mac address limiting and AOSS, are available, which makes it possible to transmit simultaneous interpretation in a highly secure environment.

※The average rate of sound cutout of ASAT is 0.05% (according to our internal research) (2) Patent pending (3) The rate can reach a percentage of two digits depending on the system environment.

A benchmark (assessed by using 50 clients)

	ABELON	Other Companies Wi-Fi	Infrared Rays	Digital Radio
Sound Quality	10-4,608kbps	10-64kbps	10 - 64kbps	10 - 64kbps
Cost	¥200,000-300,000	¥700,000-1.5million	¥1million-3million	¥1million-2million
Multi-language Ch.	1 - 16 channels	1-32 channels	1 - 16 channels	1 - 6 channels
Security	AES,WPA,etc.	AES,WPA,etc.	none	none
Latency	0.1 - 1.0sec	0.1-1.0sec	0sec	0sec
Internet Purchase and DL	Compatible	Not Compatible	Not Compatible	Not Compatible
Device	Widely used devices	Dedicated Device	Dedicated Device	Dedicated Device
Sound stable function	O(AS.A.T)	X	X	X

Comments from customers

The event host-Asiaworld Expo (Hong Kong)

Honestly, I was surprised at the voice quality of ABELON. I don't think I can go back to the simultaneous interpretation device I've used so far.

The translator manager- Edward Jones Dome (U.S.)

I was worried because the FM radio use was banned but then I met ABELON. I am using ABELON in a different event today, and am also recommending ABELON to my friends.

The person in charge of managing operation of audio at the event-Nippon Budokan (Japan)

I could hold an event successfully thanks to ABELON.

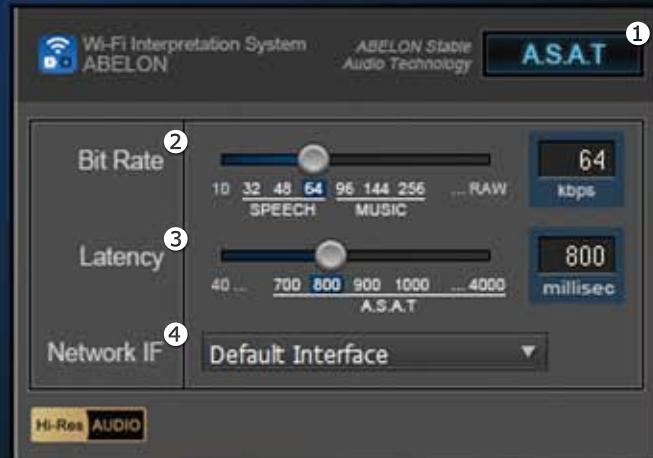
The event staff –Sajik Arena (South Korea)

There were many complaints raised about other devices but I rarely hear anybody complain about ABELON.

This photo of an event at Edward Jones Dome where ABELON was used

Clear operation and monitoring

As the simultaneous interpretation allows no mistakes, we designed it on the basis of the concept which enables clear operation as well as monitoring. Complicated functions were configured so easily that operators who access the ABELON server for the first time can intuitively control the system. Color management was done, considering the dim event hall and the interpretation booth. Indication of function recognizable at a look and contrast use to instantly distinguish on from Off and other details were designed from the user's perspective.



NETWORK Module

① A.S.A.T (ABELON Stable Audio Technology)

The development specialized in transmitting voice over the Wi-Fi network; an algorithm for the data interpolation, retransmission and synchronization. If A.S.A.T is on, the phenomenon that the voice is cut off will be prevented.

② Bit Rate

Bit rate is the amount of data that is delivered to one client per second. Please use 32~64kbps in normal times. When the network is not busy because of small number of clients, you can set a speed of 256kbps to enjoy high-quality sound. Please be careful when you set a maximum speed, because even if the raw data (uncompressed data) is transmitted at the maximum speed, there can be cases that access becomes unstable due to the network load depending on the number of clients. If the network bandwidth is not enough, you can reduce the bit rate to transmit voice stably.

③ Latency

The effect of A.S.A.T. will increase proportional to the latency, which makes it possible to stably transmit a voice. Please use 700~1000 msec in normal times.

④ Network IF

You can select the network interface you want to use.



CLIENT TERMINAL Monitor

① Counter

A total number of client accesses.

② Reset

Reset of statistical information.

③ Drop Ratio Chart

Graphically display the status of all connected clients.

④ Ucas Sent

The amount of data transmitted by Unicast.

The number of packets transmitted by Unicast.

⑤ Bcas Sent

The amount of data broadcast.

The number of packets broadcast.

⑥ Column Header

IP: the IP address of the client.

Language: the language module which a client accessed.

Drop rate: the drop rate of the audio data of a client.

DropCnt : The number of voice data drops of a client.

Rcvr% : recovery rate of the voice data of a client.

RcvrCnt : the number of times the voice data of a client was recovered.

RTRSCnt : the number of retransmission requests to the client server.

FSRatio : Sampling frequency errors between a client and a server.

SSID : the name of the Wi-Fi network which a client accessed.

OS: The name of the client OS.

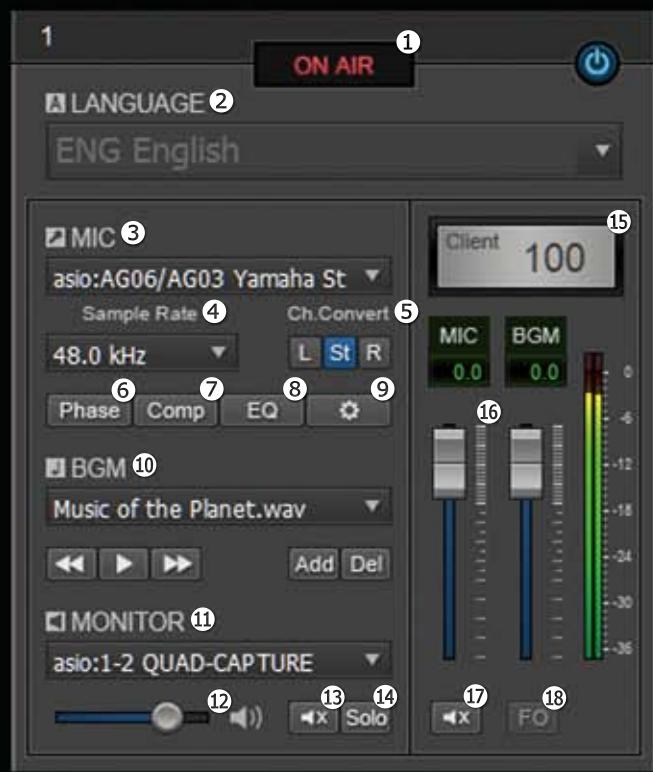
Model: A product name or a model number of a client.

Hostname : a host name of a client.

CPU : CPU of a client.

The screenshot shows a detailed view of the 'CLIENT TERMINAL Monitor' interface. It displays a table of client connections with the following columns:

IP	Language	Drop%	DropCnt	Rcvr%	RcvrCnt	RTRSCnt	OF	UF	SR	PlayTime	FSRatio	SSID	OS	OS Ver	Model	hostname	CPU
192.1...	ENG English	0.00%	0	0.09%	27	33	0	0	28	613.2s	-0.00%	Wind...	10.0	Intel(R) ...	asd	x86	
192.1...	ENG English	0.08%	6	0.21%	16	44	0	0	1	152.7s	-0.00%	AP...	iOS	6.1	iPod Tou...	hiro-no-i...	armv
192.1...	JPN 日本語	0.00%	0	0.04%	32	40	0	0	12	1,643.0s	+0.00%	AP...	iOS	10.0	iPhone 6...	iPhone6	arm6
192.1...	ENG English	0.00%	0	0.11%	40	79	0	0	8	703.8s	+0.00%	AP...	iOS	10.1	iPhone 6S	ShinPho...	arm6
192.1...	JPN 日本語	0.00%	0	0.13%	110	133	0	0	15	1,643.2s	+0.00%	AP...	iOS	10.1	iPhone 7...	iPhone7p	arm6
192.1...	KOR 한국어...	0.00%	0	0.05%	38	45	0	0	13	1,629.8s	+0.01%	AP...	iOS	9.3	iPhone 5	Hirokinol...	armv



LANGUAGE Module

① ON AIR

initiate/stop voice transmission on the air

② LANGUAGE

If a language in which the voice is transmitted is selected, the language is indicated on the receiving device, which helps a participant conveniently choose a language he or she wants without confusion. Please note there are letters which cannot be indicated depending on the device.

③ MIC

A microphone or the external voice input device is selectable. It is also compatible with ASIO, which allows the high-quality sound to be transmitted. Select the name of the device starting with "asio." If "OFF" is chosen, sending the BGM only is also possible.

④ Sample Rate

The sampling frequency of the voice input device is selectable. In normal voice/music transmission, set the rate to 48 kHz which is the most efficient.

With regard to Hi-Reso transmission

If you select a raw bitrate of the network module, and choose the sampling rate of 88.2 kHz or 96.0 kHz in the language module, you can transmit a high resolution sound source. If you use a voice device compatible with ASIO for 96kHz/24bit, you can also transmit a high resolution quality sound.

⑤ Ch.Convert

Select [St] in normal times. If the monoral voice input is heard in only one side of the ear, either right or left, select [R] or [L] to make it heard at the center.

⑥ Phase

The phase of the input voice is reversed.

⑦ Comp

If Comp is "On," the compressor effect works to make sound more clearly heard by restricting the intonation of the sound pressure or stressing the consonant. The compressor is controlled on the ⑨ [settings] screen.

⑧ EQ

If EQ is "On," the equalizer effect which controls the frequency characteristic applies. This can be controlled on the ⑨ [settings] screen.

⑨ Setting

Open the ⑨ [settings] screen either of Compressor or Equalizer.

⑩ BGM

BGM can be transmitted before an event or in an interval. Add music files by clicking [ADD] to play music. Songs are repeatedly played in order. Click [Del] to delete songs in playlists.

⑪ MONITOR

You can monitor voice of transmitter. Select the name of the device starting with "asio", which allows you to monitor the sound with a playback device compatible with ASIO.

⑫ MONITOR Volume

Monitor volume is adjustable without interference with sound transmitted to devices.

⑬ Mute

Mute monitor sound.

⑭ Solo

If you want to monitor the sound in a certain language module, click Solo. Solo works effectively when operating the multi-language module.

⑮ Client

Devices set up to the corresponding language module are displayed.

⑯ Fader

Fader adjusts input audio volume. When the volume exceeds the maximum level for transmission, sound will cut off and clip indicators will illuminate in red.

⑰ Mute

Mute microphone.

⑱ FO

BGM can automatically fade out. Fading audio out to INF (silence) will naturally stop the music.

PC : Windows 7-10 (32/64bit) / Memory : 2GB / HD : 100MB / CPU

: Core i5 / Display : 1366x768 or higher

Number of concurrent connections: Max.Clients 100

The number of languages transmitted simultaneously: Max.16

The compatible voice input/output IF: Windows Standard or ASIO2.x

Sampling Rate : 41.1kHz / 48kHz / 88.2kHz / 96kHz

Quantization bit: 16bit(Windows), 24bit(ASIO)

The number of channels: 2ch stereo

Sound compression: 10 ~ 559kbps / RAW

L4 control: UDP Unicast

Standby time (latency): 20 ~ 4000 msec

Built-in effector: Compressor / Parametric Equalizer

Compatible BGM file : WAV / MP3 / M4A / AAC, etc

Specifications are subject to change without prior notice for reasons of performance enhancement.

Lowest cost in the industry and flexible subscription policy

ABELON Server

¥98,000



Annual Subscription

The number of clients × ¥1,000
(Number of connected devices)

- The number of clients refers to the number of devices that can simultaneously access the ABELON server.
- Hardware (PC, Wi-Fi routers, USB microphone, etc) shall be provided by users.
- You can purchase 10 unit pack with a 20 unit minimum purchase requirement.
- Only credit cards are available.

In the case of 50 Clients (50 connections)

1st year: ABELON Server ¥98,000 + (Clients 50 × ¥1,000 = ¥50,000) = ¥148,000

After the First year: Clients 50 × ¥1,000 = ¥50,000

For 10 years...

Total Cost!

ABELON Server ¥98,000 + (Clients 50 × ¥50,000 × 10 years = ¥500,000) = **¥ 598,000**

Point!

- ① Keep your system up-to-date and get support from ABELON all the time!
- ② Annual subscription policy allows you to enjoy our service with relatively low cost.
- ③ You will be less concerned about inventory.
- ④ The number of registered devices is scalable according to your business size.

How to use



Step 1 Go to abelon.net and download ABELON server.

Step 2 Boot ABELON server and register your ID and Password to purchase the service.

Step 3 Connect Wi-Fi router via LAN cable and USB microphone.

Step 4 Install ABELON on a smartphone or a tablet.

Clients requirements: iOS8 or later / Android4.0 or later / Internet is required for installation / Purchase is proceeded on credit card / Specifications are subject to change without prior notice for reasons of performance enhancement.

Free trial version is available that you can connect up to 5 Clients.
Try and experience our service! Download from www.abelon.net



ABELON Inc.

www.abelon.net

abelon.info@gmail.com

3-4-414 Utase Mihama-ku Chiba 261-0013 JAPAN