

# The Development of Improvised Simultaneous Conference Interpreting Equipment

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## **Abstract**

*The department involved in this study received a demerit during the departmental evaluation for not providing interpretation students a practicum of which the reason being a lack of simultaneous conference interpreting equipment. Simultaneous interpreting (SI) equipment is very expensive to rent not to mention to buy. The objective of this case study is to develop affordable SI equipment, of which the price is approximately 1/20 that of the commercial SI equipment, for student interpreter training. Therefore, this study attempts to develop reliable and yet inexpensive SI equipment. The study is based on a pilot study; the equipment used included Listen 72/216 MHz FM microphones and receivers and MIPRO MTG-100a as makeshift SI equipment at workshops and conferences. It intends to answer the following research questions: (1) How can Listen 72/216 MHz FM microphones and receivers and MIPRO MTG-100a be used in an international conference and how did the audience react? (2) How can such equipment handle complicated interpretation tasks, e.g. relay interpreting of more than one language? (3) What factors affect successful use of such equipment? (4) What government regulations dictate and how they regulate the legal use of such equipment? This study used qualitative research methods to collect and analyze data to complete the report. The data consist of interviews, questionnaires, field notes, and reflective notes. The participants included the teacher/researcher, research assistants, and student interpreters. The results of the study indicated that the SI equipment developed in this study is affordable, inexpensive, and effective. Any university can own them and use them in the conferences.*

**Keywords:** simultaneous interpreting equipment, interpreter training, conference interpreting, FM microphones, relay interpreting

## **Introduction**

The department involved in this case study received a demerit in a departmental evaluation by the Ministry of Education for not providing students interpretation course practicum. Therefore, we offered a practicum for conference interpreting and found out that we needed affordable SI equipment because commercial SI equipment is expensive to rent (NT\$ 29,000 per day). This incident motivated me to conduct the current study. However, to do a practicum in simultaneous interpretation conferences, interpreting equipment rentals are more expensive than student interpreters' interpretation fees (Chen, 2015). Conference interpreting equipment is expensive to rent not to mention to purchase.

There are different types of conference interpreting equipment. They use different means to transmit signals. They include (1) FM (2) infrared (3) FM wideband or FM narrowband (4) FM 72 MHz, and (5) FM 216 MHz. (6) MIPRO MTG-100a. It operates in the license-free 865 & 928 MHz ISM band. ISM band stands in need of no user licensing. They each have their pros and cons. The following equipment was used in the pilot study: (1) Listen Display Receiver LR-400; (2) Listen Portable Transmitter LR-500; and FM-900 (a clone); and (3) MIPRO MTG-100a. In the pilot study, the interpreters interpreted at a corner of the auditorium or in the control room to avoid interfering with the delegates.

In order to enhance the edge of competition, most departments of foreign languages in Taiwan offer interpretation courses; however, very few universities have SI equipment or interpreter training classrooms. Even if they do, they do not have enough of them to go around. As a result, the training they can do become limited. In addition, after a few years, the expensive equipment become out of order. Therefore, the objective of this case study is to develop affordable SI equipment for student interpreter training, practicum, and conference interpreting. The equipment developed in this study will cost approximately 1/20 that of the commercial SI equipment; and since the price is so low, any university can afford them. The development of the improvised SI equipment will also make it possible for all the schools to have reliable equipment for interpreter training and interpreting practicum. Consequently, the interpretation students in Taiwan will become more competitive in the interpretation markets in Taiwan and abroad.

## **Literature Review**

Interpreting has become more and more popular in Taiwan, Mainland China, and the rest of the Chinese-speaking communities, with the increasing number of international conferences that require interpreters. It is generally believed that due to its level of difficulty, interpreting courses should be offered at the post-graduate level, but a lot of interpretation courses are offered in undergraduate programs when students' English is not even ready for interpreting yet. Therefore, interpretation courses offered in undergraduate programs should emphasize both English (or foreign languages) enhancement and interpretation techniques. Some of the most important things for them to learn are the interpretation tasks and the equipment they need to become familiar with to perform interpreting. The best way to learn to interpret is to learn the tasks that make up interpreting. These tasks include reading aloud, sight translation, summarizing, paraphrasing, sight interpreting, etc. However, they are beyond the rim of this study. In this study, I will focus on what interpreting is and what kind of equipment is required to do interpreting well. There are different types of interpreting, including consecutive interpreting, simultaneous interpreting,

technology-aided interpreting, and whispered interpreting. Consecutive interpreting requires no special audio equipment but loudspeakers, microphones, and a notepad. Simultaneous interpreting requires microphones, speakers, receivers, transmitters and soundproof booths. Whispered interpreting can be performed either with simple equipment or without any equipment. In this section, I will introduce each mode of interpreting and equipment required in more details.

### **Consecutive Interpreting**

According to Gillies (2017), consecutive interpreting is one of the two techniques that go to conciliate conference interpreting. It involves listening to what someone has to say and then, when they have ended, recreating the same message in another language. The speech may be anything between a minute and twenty minutes long and the interpreter will depend on a coalescence of notes, memory and general knowledge to procreate their rendition of the original. A speaker, an interpreter, a notepad, and a pen are all the accompaniments an interpreter will need. Gillies (2017) further indicated that seventy years ago conference interpreting portended consecutive interpreting. Simultaneous interpreting, or the apparatus to make it come true, had not yet been invented. Consecutive interpreting was the standard for international meetings of every variety. Simultaneous interpreting perked up after World War II and by the 1970s had outstripped consecutive as the main mode of conference interpretation.

Consecutive interpreting has not absconded, however. It is still a requisite part of an interpreter's repertoire and is envisaged by many to be a cut above the two skills. Although simultaneous interpreting has taken over from consecutive almost without reservation at the meeting room table, where conference facilities are often able to supply the equipment called upon to implement simultaneous interpreting, there are many cases where consecutive survives and will continue to survive.

### **Simultaneous Interpreting**

There is hardly any research on the development of SI equipment. However, there are some studies that stress the importance of interpretation practicum and the quality of interpretation equipment. For instance, Takeda (2003) delineated the practicum done at the MA program in Translation and Interpretation at Monterey Institute of International Studies (MIIS) by saying that in an attempt to offer students a learning opportunity that resembles the professional conditions, MIIS has been providing the interpretation practicum course for students to regularly interpret real-life lectures and conferences. The first known use of SI equipment, manufactured by IBM, was in the Nuremberg Trial (Gaiba, 1998). Jones (2014) boiled down SI equipment to their simplest form by saying: "Despite various possible refinements, a simultaneous interpreter's equipment is basically a set of headphones and a microphone" (p.67). Jones (2014) gave a vibrant description on how SI equipment was used in an international conference: In most cases nowadays simultaneous interpreting is done with the appropriate equipment.

Delegates speak into microphones which relay the sound directly to interpreters seated in sound-proofed booths listening to the proceedings through earphones; the interpreters, in turn, speak into a microphone which relays their interpretation via a dedicated channel to headphones worn by the delegations who wish to listen to the interpreting (Jones, 2014, p.5).

Pöchhacker (2016) indicated that SI equipment is required when doing SI. Nevertheless, SI with

technical audio equipment.... is so universally accessible today that the term SI is often used, shortened for spoken language interpreting, with the use of SI equipment in a soundproof booth. Nolan (2012) indicated that SI is the norm, rather than the exception, in today's conferences by saying that on account of the progress of modern sound equipment, SI has now become the most widely used method, in every type of business conventions, summits, and conferences. It is even achievable through the internet.

Hammacher and Tuccio (2011) explained in detail the interaction between the interpreters and the conference organizers by pointing out, "More specifically consultant interpreters advise the client on the composition of the interpretation team, provide a quotation for the interpretation service, recruit interpreters, prepare interpreters' contracts, forward conference documents to the interpreters and advise the client on interpretation equipment" (p.9). Interpreters need to become familiar with the use of SI equipment because, as Hammacher and Tuccio (2011) indicated, that a crucial part of an interpreter's working conditions encompasses the technical equipment the conference organizer adopted to use. Both the speakers' manner of delivery and the quality of the SI equipment can affect the input audio quality as Christoffels and Groot (2009) indicated, "The clarity of input in interpreting can vary widely because of the variability of the speakers or because of variability of the quality of technical equipment and environmental circumstances" (p. 456).

The real conference conditions are usually worse than we typically expected as Moser-Mercer (1994) pointed out, "... Live speakers ad-libbing speeches come much closer to real life than extraneous texts taped and played back on poor sound equipment" (p. 15).

According to Edwards (1995), four types of SI equipment are used in court. They are (1) wired SI equipment; (2) wireless FM SI equipment; (3) wireless SI equipment using infrared; and (4) soundproof booth with an infrared system. Edwards (1995) gave a vivid illustration of how wired SI equipment are used by saying, "It consists of a microphone connected to an amplifier, which in turn transmits the sound down a line or wire to a series of jacks into which are plugged earphones or headsets for the defendants" (p. 78).

Edwards (1995) showed how wireless FM SI equipment work by indicating, "Portable wireless equipment works on a radio frequency. The interpreter has a transmitter and a microphone, and the transmitter broadcasts to the defendant who has a receiver with a headset or earphone" (p.78). Wireless SI equipment uses infrared, as Edwards (1995) illustrated, "The microphone is connected by a long wire to the infrared transmitter, so the interpreter is somewhat limited in a range of motion relative to the transmitter. The defendants are given wireless headsets, each with its own volume control" (p. 79). Another type of SI equipment is the soundproof booth with infrared system which according to Edwards (1995) are arranged thus, "In a booth interpreters receive the sound they need to hear through a headset, and they have a volume control on the incoming sound, so they can make the sound as loud as they like" (p. 79).

### **Technology-aided Interpreting**

In a paper, Hamidi and Pöchlacker (2007) reported a diminutive empirical study to test the vivacity or even preeminence of technology-assisted consecutive interpreting as a new interpreting method for conference interpreters. In this technique, instigated in 1999 by an EU staff interpreter, a digital voice recorder is used to record the rudimental speech which the interpreter then plays back into earphones and

interprets simultaneously. The performances of three experienced professional interpreters (French-German) in the decorous consecutive and the ‘simultaneous consecutive’ mode were valued and compared on the basis of transcript analysis, self-assessment and audience response. Their findings suggest that simultaneous consecutive permits augmented interpreting performances, as evinced in more effusive delivery, closer source–target congruity, and fewer prosodic digressions. Though the interpreters’ personal working experience and predilections appeared to have a significant repercussion on their performance, all three subjects easily adopted the technology-assisted interpreting mode and considered it a feasible technique.

### **Whispered Interpreting**

Whispered interpreting, a type of interpreting that serves only a few audience members who sit closely by the interpreters who interprets softly, requires some simple equipment or no equipment at all. As Jones (2014) depicted that there are situations ... when simultaneous interpreting, also referred to as ‘chuchotage’, is done without any equipment. In such cases, the interpreter must still make certain that the working conditions are optimal. This means sitting, or standing, where you are assured you can hear the speaker and being in a location to speak amply softly in order not to encumber their listening or disconcert other participants, who are listening to the original in the meeting. For the most part, this means you are permitted to take no notice of protocols and may even ask to adjust positions with a delegate. Pöchhacker (2016) explained what whispered interpreting is by saying that only where the interpreter works right next to one or no more than a few listeners can he or she present a translation by whispered interpreting, which is done by speaking in a low voice. This is also achievable with portative transmission equipment as used for guided tours. When I studied at the University of Texas at Austin, I was invited to attend a conference. It turned out that it was a Spanish speaking conference, but Spanish is Greek to me. Seeing that I couldn’t make head or tail of what they were talking about, the president of the association served as my personal interpreter by doing whispered interpreting into English. That was my personal experience with whispered interpreting. And my experience tells me that whispered interpreting without equipment can be as clear as any other mode of interpreting. In addition, there was an advantage, and that is, I was able to ask the interpreter to clarify some of the points that I couldn’t understand.

### **Research Methods**

This study uses qualitative methods to collect and analyze data to complete the report. It intends to answer the following research questions: (1) How can Listen 72/216 MHz FM microphone transmitters and receivers and MIPRO MTG-100a be used in an international conference, and how did the audience react? (2) How can such equipment handle complicated interpretation tasks, e.g. relay interpreting of more than one language? (3) What factors affect successful use of such equipment? (4) What government regulations dictate and how they regulate the legal use of such equipment? The data consist of the spoken and written output of the participants, interviews, field notes, and reflective notes. The participants consisted of the teacher/researcher, research assistants, student interpreters who are doing their practicum. They also include conference organizers and participants in a multi-lingual international conference.

### **Procedures**

The procedures below have been followed to implement the study:

(1) I used one Listen 72/216 MHz FM microphone transmitter and nine receivers and also ten MIPRO MTG-100a (one microphone transmitter and nine receivers). To test their reliability, I have used them at an international conference in Taipei, Taiwan.

(2) To test the reliability of the equipment during relay interpreting, another target language (Japanese) was added.

(3) To answer research question three, (What factors affect successful use of such equipment?), I have administered questionnaires, conducted interviews, and taken observation notes and field notes throughout the entire interpreting process.

(4) I have gotten online to familiarize myself with the relevant government rules and regulations guiding the use of FM transmitters and receivers in Taiwan.

### **Results and Discussions**

After numerous experimental studies with small groups of audience members in workshops, seminars and lectures, the moment of truth has finally presented itself. This time is going to be different because of the size of the audience and the number of the sets of radio transmitters and receivers. It is also a great opportunity to find out how the audience reacts to the use of Listen, an American brand, and MIPRO, branded in Taiwan and made in Taiwan. I do not have any bias toward either of the two companies. The products will speak for themselves. What follows below is the reaction of the audience members toward their experiences of using this equipment. In the following section, I will answer the research questions I posed above.

1. How can Listen 72/216 MHz FM microphones and receivers and MIPRO MTG-100a be used in an international conference and how did the audience react?

According to the manual, "FM Assistive Listening Systems" (2016) which represents frequency modulation and it's a popular form of radio transmission. FM is one of the considerable wireless technologies that transmit sound directly to the hard of hearing persons in America. FM accommodates improved listening clarity for people with hearing loss who experience difficulty listening. The FM transmitter microphone picks up a speaker's words, not over inches of their mouth. Therefore, the sound that the listener hears is in its most favorable state: free from attenuation, distortion, and background noise. The greatest dominance of a portable FM assistive listening system is that it is easy to set up and puts the user in complete control, and can be used in many environments. The FM radio frequency signal is picked up by the user's FM receiver.

According to MIPRO Wireless Microphone Systems (2016), Wireless PA Systems, MTG-100a is a ground-breaking digital wireless tour guide & language interpretation systems. It is outlandish solid, paltry and easy to use. Digital design provides crystalline aural quality, secured and veracious transmission, and insensitive to tampering quirks that are nonpareil by the deficiency of simple analog design systems. It operates in the license-free 865 & 928 MHz ISM band. ISM band stands in need of no user licensing; thus, no worries about changing groups and channels when operating in motley countries. Each band is preset with 16 switchable frequencies and ensures several different tours or groups can be operated at the same locale without prying with each other. This system is paradigmatic for small to large, indoor or outdoor

applications for guides, interpreters or presenters to divulge cogently to a group of people, repudiating trying surrounding noise. Ideal applications include language interpretation in the courtrooms, educational institutions, conferences or conventions, to name just a few. In fact, it is very difficult to use transmitters and receivers of two different systems and two different brands. But I made it and it went very well particularly because they are from different brands. It is what happened at the conference. The speaker gave a presentation in English with a microphone. One interpreter interpreted into Chinese and the Japanese interpreter relay interpreted from Chinese into Japanese. The English interpreter listened to the speaker physically without the headphone in a corner of a medium-sized auditorium that can sit 118 persons. Her audience listened to her through channel 1. The Japanese interpreter listened to the English interpreter through channel 1, at the other corner of the auditorium and relayed into Japanese. His audience listens to the Japanese interpreting through channel 2. In a medium-sized conference room, the transmitters were able to cover the entire room. However, in a bigger room, the interpreter should sit in the center of the room and listen to the speaker and softly interpret so that the transmitter can cover the entire room. The audience would listen to the interpretation to make sure that the headphone wires are extended to the fullest because the wires of the headphones serve as antennas.

How did the audience react to the use of Listen 72/216 MHz FM microphones and receivers and MIPRO MTG-100a transmitters and receivers? Together with the equipment, the audience was given questionnaires regarding the quality of the interpretation equipment. Twenty audience members completed the forms. The followings are questions and their responses.

(1) Were you satisfied with the SI equipment you used today?

Eighteen audience members said they were satisfied with the equipment. One audience member said the equipment was okay. One member said he was not satisfied.

(2) If you were not satisfied, why? Please give details.

There were some popping noises that the interpreters made because they were talking too close to the microphone when interpreting.

(3) Were you satisfied with the equipment? If you were, on the scale of 1 to 10, what score would you give?

One member gave a six. Three members gave it a seven. Thirteen members gave it an eight. Two members gave it a nine. One member gave it a ten.

(4) Comparing the SI equipment you used today with the ones you had used before, which one is better?

Nine members said the current equipment was better; three members said the previous equipment was better; five members said they were the same; two members said they couldn't compare because it's the first time they used such equipment, and one member gave no comments.

(5) Do you have other comments on our SI equipment?

Eleven members gave no comments; three members commented it was loud and clear; five members said there were noises every once in a while; one suggested that the equipment should all be tested before the conference.

2. How can such equipment handle complicated interpretation tasks, e.g. relay interpreting of several languages?

In order to test the equipment's ability to handle complicated language interpreting, e.g. relay interpreting, another language, Japanese, was used. When the speaker spoke in English, in the case of relay interpreting, the chief interpreter interpreted by speaking to the transmitter/microphone at a specific channel (Chinese), and her audience listened to this channel. The relay interpreter listened to the chief interpreter with the receiver tuned to the chief interpreter's channel (Chinese) and sat at a distance from the chief interpreter to avoid interference. The audience who listened to the chief interpreter tuned to her channel (Chinese). For example, the chief interpreter used channel A, and her audience also used channel A. The relay interpreter listened to the chief interpreter through channel A. The relay interpreter spoke to the transmitter/microphone in channel B (Japanese), and the audience of the relay interpreter listened to him through channel B.

3. What factors affect successful use of such equipment?

Based on the current study, I found out that the following factors may affect the use of interpretation equipment: (1) Distance: All the interpretation equipment has been designed to cover a certain distance which in this case is approximately within 60 meters. The closer the audience are, the better the sound quality is. (2) The handling of the microphone/transmitter and the receivers: The wire of the transmitter/microphone and the wire of receivers serve as antennas, so they should all be extended to the fullest possible to work efficiently. (3) The cell phones: audience's cell phones may interfere with the transmission and should be turned off or turned to the flight mode to avoid interference. (4) The handling of the equipment: the audience's receivers should be adjusted to the appropriate channel and should not be moved to another channel by the audience. (5) Use the blank channel: In the case of the interference from existing channels, the receiver and transmitter should be tuned to a blank channel. (6) Batteries: Always make sure that the batteries are new and fresh. Only new and fresh batteries should be installed and used before the beginning of the conference. (7) Popping noises: In the questionnaire, the only man-made thing that the audience complained about is the popping noises, which can be avoided by putting a pop filter on the microphone.

4. What government regulations dictate and how they regulate the legal use of such equipment?

1. According to Part of the revision of the Republic of China radio frequency distribution table [中華民國無線電頻率分配表部分修正內容] (2014), the content of the radio frequencies distribution of ROC 88-108 MHz channels is for FM broadcasting businesses.

2. According to part of the revision of the Republic of China radio frequency distribution table [中華民國無線電頻率分配表部分修正內容] (2014), the content of the radio frequencies distribution of ROC, 485-530, 748-758, and 794-806 MHz channels are for low power microphones and earphones that do not interfere with the use of channels of police and firefighting and must accept the interference of legal communication channels.

3. According to Clause 3, Article 49 and Clause 10, Item 1, Article 65 of the Communication Law [電信法第 49 條第 3 項規定與同法第 65 條第 1 項第 10 款規定], low power transmissions (e.g. FM

transmitters, wireless headphones, wireless microphones, wireless computer accessories, remote control toys, remote control cameras) must be certified and inspected; violators must be punished by communication law.

### Conclusion

The results of the study indicated that improvised SI equipment may serve as commercial SI equipment when fully fledged SI equipment is unavailable. However, when they are used in a conference, it is helpful to have the interpreters work in the control room and listen to the speaker through the headphone of the control room. In addition, for optimal listening effects, the audience should turn off their cell phones or turn them to the flight mode. Finally, the audience who listen to the interpretation should make sure that the cords of the headphones are extended to the fullest because they serve as antennas.

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## Appendixes

### Questionnaire

#### 問卷

The title of experiment: The Development of Improvised Simultaneous Conference Interpreting Equipment

實驗名稱：簡易會議同步口譯設備之研發

Q1: Were you satisfied with the equipment you had used today?

請問您對今天使用的口譯器材滿意嗎？

Yes 是

No 否

Q2: If you were not satisfied, why? Please give details.

如果您不滿意，為什麼？請詳述原因