Center for the Protection and Research of Language Resources of China at Beijing Language and Culture University

Norms and Standards for Language Resources Protection in China

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Foreword by Prof. Cao Zhiyun

On February 16, 2022, 93-year-old Cristina Calderon passed away in Tierra del Fuego. She was the last person in the world who spoke the Yagan language. Her daughter Lidia Gonzalez remembered her thus, "With her passing, a large part of the cultural memory of our people is gone." Indeed, over the last decades, many languages around the world are moving toward extinction, and protecting them has become a global issue.

China is a developing country with rich and varied language resources, but where many small languages and dialects are in danger of disappearing. The work *Chinese Languages* by Sun Hongkai (Commercial Press, 2007) collected and recorded 128 native tongues, of which 64 were spoken by less than 10,000 people, 24 by less than 1000, and 11 by less than 100. Investigations during the later "Project for the Protection of Language Resources of China" revealed that at least another 3 languages had since dropped to less than 100 speakers. One of the reasons for this is the rate of urbanization in China which has grown rapidly from 17.92% in 1978 to 65.2% in 2022. Such radical social changes have fundamentally altered the centuries-old linguistic environment in which languages were passed down the generations, and as a result, small and vulnerable tongues as well as dialects are rapidly decreasing and moving inexorably toward extinction.

Starting in the early years of the 21st century, strong voices in Chinese academic circles began calling for an effort to protect our many languages. Fortunately, the government responded and since 2011, a number of directives have been included in important official documents, calling to "systematically protect the languages of our ethnicities," "protect and pass on the culture of dialects," "step up the protection and dissemination of the languages, cultures and finest works of minority ethnic peoples," and "methodically protect the dialects and languages of ethnic peoples." In 2015, "Project for the Protection of Language Resources of China" was launched charged with investigating language resources, preserving them, presenting them to the public, and revitalizing them. As of 2019, the project has systematically and methodically investigated 123 different languages spoken in 1712 locations, collected a vast amount of information on languages and dialects, built up a database of Chinese language resources, and set up various means for the display of recordings and

collections (www.zhongguoyuyan.cn). The second phase of this Project is presently underway.

From the start, the project has put a great deal of emphasis on thorough research planning and the drawing up of guidelines to direct both the actual organization of the investigation, and coordinate its many technical standards. Technical standards include survey items, survey standards, corpus collation, standards for audio and video processing, criteria for linguistic attributes, formats for written reports, as well as software parameters for recording, proof reading and subtitling, etc. All of these were first reviewed and approved subsequently compiled and printed into a handbook that was formally distributed to all local departments in charge of education and language management, as well as the universities and research institutes that participated in the project. These detailed and specific protocols and guidelines set clear, strict rules, ensuring that all work was professionally and thoroughly carried out according to a unified set of standards, thus avoiding unsupported conclusions and haphazard investigations.

In July 2017, UNESCO's *2017 Language Champion Challenge* of UNESCO-TALKMATE Nexus and Nanshan Forum for *World View of Language Protection* opened at Beijing Language and Culture University. UNESCO officials from the Knowledge Societies Division, Communication and Information Sector attended in person, and expressed their high evaluation and appreciation of the good work and results of the project. They also suggested that we summarize our experiences so that other countries could draw on them. In 2019, UNESCO issued the Protection and Promotion of Linguistic Diversity of the World Yuelu Proclamation, in which it is stated: "The development of a new international instrument with international standards or guidelines is recommended in order to capture the positive practices observed to-date nationally and internationally" and "Member States encouraged sharing standards, technical tools and advanced concepts, including open, inclusive and free, for the protection of language resources through project cooperation, academic exchanges or other ways."

In response to this call, we have compiled the present volume in English containing the protocols and guidelines the project followed in its investigations. We have also included the more important experiences and lessons we learned in the process, and hope other countries may find them useful as they work to protect their own language resources. Chapters 1–3 contain the technical guidelines, parameters and standards used in our dialect surveys, minority language surveys, language and culture surveys. All were key to its smooth running and successful completion.

It will indeed be a great honor for us if this volume can contribute in some ways to the "International Decade of Indigenous Languages (2022–2032)" and to the preservation of language and cultural diversity in the world.

Beijing, China
March 2023

Prof. Cao Zhiyun
Leading Senior Expert
Project for the Protection
of Language Resources of China

Foreword by Elsa Stamatopoulou

Critical threats to the world's languages, especially indigenous peoples' languages, undermine human dignity and the cultural and biological diversity of our world.

For the international community to recognize this, it has been a long road, paved with conflict and suffering. Linking cultural rights and language rights to our economic and environmental interdependence and well-being is a challenge and an opportunity for strengthening peace and development. The focus that the 2019 International Year of Indigenous Languages provided is unique for language justice and for building multiple collaborations around the world. This is also the case for the International Decade of Indigenous Languages (2022–2032).

An important International Conference on the "Role of Linguistic Diversity in Building a Global Community with Shared Future" was convened in September 2018 in Changsha, China. I had the honor to be invited and participate in the conference, also as team leader in the drafting team. The conference adopted Protection and Promotion of Linguistic Diversity of the World Yuelu Proclamation, a visionary contribution to the International Year of Indigenous Languages, with a solid human rights focus and inspirational recommendations to numerous actors relevant to language diversity in each country and around the world. The importance of language protectors/champions/promoters, whether they are communities, organizations, institutions or individuals, was clearly underlined.

A human rights approach to language means that we focus on the people, the language community, and their dignity. Practices of the past, but even of today, make clear that the eradication of indigenous languages is not a "natural phenomenon," but mostly a result of systemic discrimination. We need to connect with the profound trauma, including intergenerational trauma, that people suffered and are suffering because of language loss.[1]

[1] Some of the reflections in this essay draw from Elsa Stamatopoulou, Time, Politics, and Linguistic Human Rights: Bringing Words to our Songs, Chap. 13, in the *Handbook of Linguistic Human Rights*, Robert Phillipson and Tove Skutnabb-Kangas eds, Wiley-Blackwell Publishers, Hoboken N.J., pp. 195–209, 2023; also available online https://onlinelibrary.wiley.com/doi/epdf/10.1002/9781119753926.ch13.

The lens of time places emphasis on groups who have historically suffered from forced assimilation and/or colonization, including, or especially, through the suppression of their languages, among other aspects of their identities, more specifically indigenous peoples and minorities—or what we could call historic minorities.

Becoming aware of the histories of language suppression and their impacts on persons and groups at country level is the first step. *Raising awareness is a human rights matter and the beginning of a possible reversal of historic injustices regarding languages.* Awareness needs to become embedded in society. Part of the state's obligations under the non-discrimination norm is to take measures to make the broader society aware of minority cultures and languages. There is therefore a lot that can and should be done through formal and non-formal education.

The 2018 Protection and Promotion of Linguistic Diversity of the World Yuelu Proclamation has recognized the complexity and enormity of the issue of preservation, development and revitalization of indigenous and other languages, and that there is a renewed interest in this area around the world. It is clear that a gap exists in current international standards on language rights. Developing new international standards or guidelines will help capture the positive practices observed in recent times nationally and internationally, in ways that can crystallize customary international law.

Denial of language rights for minority and indigenous peoples' and other ethnic groups has often led to conflict. How can we expect people to stay peaceful and give their full potential to development if we silence their very language? What can we be taught from research that tells us that, while it takes one generation to kill a language, it takes three generations of sustained efforts with the will of communities concerned to bring languages back? What can we understand from conflicts, but also reconciliation efforts, that have had languages at their center? Why has it taken so long to recognize that something must be done about language loss? Underlying is the word "justice," in fact, a gap of justice in terms of protection, access and promotion of languages.

I want to acknowledge the tremendous efforts and good practices that are developing around the world at grassroots and at government level. Some 20 countries in Latin America are pursuing intercultural bilingual education—even if implementation is imperfect. It is a sign of hope and a lesson for others that several countries on various continents have recognized indigenous languages as official languages.

Another point understood today is that threatened languages **are useful to the world overall**. We recognize **the usefulness of traditional knowledge carried through languages, especially** in the face of **environmental destruction and climate change** that affect us all. There is precious knowledge enveloped in the 35 words the Inuit have for snow and the 100 words the Icelanders have for wind. Already in 1992, the Earth Summit, in the Convention on Biological Diversity (CBD) (Article 8j), recognized the value of traditional knowledge for biodiversity. And state parties to the CBD have established as an important **indicator of biodiversity** "the status and trends of linguistic diversity and the numbers of speakers of indigenous languages." It is also gratifying that after years of study and analysis, since 2010, UNESCO and the CBD have launched the concept of and a program on **biocultural**

diversity, demonstrating that we cannot separate the two and that public policies have to address them both together.

Discussing language justice and human rights brings out certain important points. The first is that language rights are part of international human rights standards in treaties or declarations. The 2007 **UN Declaration on the Rights of Indigenous Peoples** recognizes, the right of indigenous peoples to revitalize and transmit to future generations their histories, languages, oral traditions, philosophies and to designate their own names for communities, places and persons, and the obligation of states to ensure that indigenous peoples can understand and be understood in political, legal and administrative proceedings (art. 13), the right to establish and control their education systems and institutions providing education in their own language and in a manner appropriate to their cultural methods of learning and teaching, the right to have access, when possible, to an education in their own culture and provided in their own language (art. 14), the right to establish their own media in their own languages and have equal access to all forms of non-indigenous media (art. 16).

Various articles of the 1992 **Declaration on the Rights of Persons belonging to National, Ethnic, Religious or Linguistic Minorities** have a similar direction.

By now the practice and interpretation of language rights by international human rights and other bodies has developed in support of language rights, thus creating a gap between what the written legal norms are and what the practice today is. This is especially the case regarding provision of mother tongue education at elementary school level, which international bodies consider indispensable and a fundamental human right for minority and indigenous children.

Applying a human rights approach for language justice also offers a number of conceptual and operational tools that can boost languages[2]:

(a) It provides the understanding that human rights (civil, cultural, economic, political, social) are **intercomplementary, interdependent, and interrelated**. In the case of language rights, it would help us ask questions about, for instance, the links between language and the right to adequate health care, or the right to work, or the right to education.

(b) A human rights analysis identifies the duties of states in four main categories: respect, protect, fulfill, remedy. **Respect** (i.e., the duty of the state and its agents to not interfere with the free exercise of human rights); **Protect** (i.e., the duty of the state to intervene and prevent non-state actors from interfering with the free exercise of human rights); **Fulfill** (i.e., the duty of the state to take specific measures, especially in terms of budgets, to support language rights; it would mean, for example, mother tongue education in elementary school, lest the children stay illiterate); **Remedy** (i.e., the duty of the state to take, for example, special measures for indigenous communities whose languages are at risk of extinction).

[2] This is according to international human rights theory and practice developed by human rights treaty bodies, human rights rapporteurs, resolutions adopted by states at the United Nations and via policies adopted by the UN system agencies in addition to the academic literature around the human rights approach.

(c) The human rights approach provides **specificity based on international law**, on the human rights treaties most states have ratified.
(d) The human rights approach is linked to **accountability**; it helps answer the question of who is responsible/who is the duty bearer in a specific context for language rights; the concept of accountability also brings in the notion that the state and its agents have the duty to act in a certain way vis a vis rights-holders, according to the state's international legal obligations; not just as an option or for a philanthropic motive.
(e) A human rights approach immediately brings in the fundamental norm of **non-discrimination and equality**; this includes paying **attention to the most vulnerable**.
(f) A human rights approach places **emphasis on participation**, in this case, the participation of the language group concerned in discussions with the state/in decision-making regarding language rights implementation.

Very importantly, respect and promotion of language rights can help mend historical trauma and injustice, and build positive intercultural relations and social cohesion. While it may not be able to address all the issues raised by indigenous peoples and minorities, it will go a long way toward solving long-standing disputes and social trauma that have often led to numerous conflicts around the world.

The Yuelu Proclamation has made strategic recommendations. They include the recommendation to develop new international standards or guidelines that would capture the positive practices observed to-date nationally and internationally. The Yuelu Proclamation also recommended that the UN launch an International Decade of Indigenous Languages, that was indeed proclaimed by the UN General Assembly and started in 2022.

Commitment, hard work, cooperation, and inspiration will certainly accompany the languages of the world during this Decade, especially threatened languages, most of which are indigenous languages. This book is dedicated to the many actions that the People's Republic of China will be planning and implementing.

Our world today moves us creatively to interculturality. This requires respect for and dialogue among cultures, different cultures and languages. Language justice is an issue whose time has come.

Let me end with an inspiring Aymara word from an Andean country:

Pashpashqtwa,

which means "despite everything, I continue being."

New York, USA
March 2023

Elsa Stamatopoulou
Professor of Columbia University

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Congratulatory Message from Ms. Audrey Azoulay

Linguistic diversity plays an important role in building a global community with a shared future as the uniqueness of each language enriches our collective reservoir of wisdom. Access to the diversity of languages can awaken curiosity and the mutual understanding of peoples. UNESCO promotes linguistic diversity by contributing to the preservation and revitalization of endangered languages.

Linguistic diversity goes beyond theory: it has a direct and immediate impact on all aspects of society, including preserving traditional knowledge and promoting contemporary cultural expressions.

The Asia-Pacific region has a great wealth of linguistic diversity and this important international conference is a celebration of that rich variety.

This conference represents a unique opportunity to contribute to the work toward the 2019 International Year of Indigenous Languages through the promotion of language protection, access to language resources and showcasing emerging initiatives in the Asia-Pacific region.

I wish to express my sincere gratitude to the Ministry of Education of the People's Republic of China, the National Commission of the People's Republic of China for UNESCO, the National Language Commission of the People's Republic of China, and the People's Government of Hunan Province of the People's Republic of China for having organized this timely event.

I wish all participants fruitful deliberations throughout the course of this conference.

Audrey Azoulay
Director-General of UNESCO

Protection and Promotion of Linguistic Diversity of the World Yuelu Proclamation

Introduction

We live in a society that is comprised of differing languages, cultures, ethnicities, religions, and social systems, rendering it a mutually inclusive community. Language is one of the fundamental preconditions to human development, dialogue, reconciliation, tolerance, and the peaceful existence of human society.

People need language to communicate with one another and pass along from one generation to the next generation knowledge, ideas, beliefs, and traditions, which are essential for survival, dignity, well-being, evolution, and peaceful co-existence. We are reminded that language is best taught to and learned by each generation through children early in their lives.

Moreover, language is one of the essential characteristics of culture enabling people to socialize and form a joint future through shared patterns of behaviors, interactions, cognitive constructs, and understanding. It is the main carrier for recording and inheriting the unique culture of a group of people, region, and world. Furthermore, language encodes human traditional knowledge built over centuries of development and application; and stored as a repository to further human development as well as seen as human ability to modify, adapt, and make necessary adjustment to the changing environment.

We the participants from around the world representing governments, national language harmonization institutions, academia, representatives of cultural, information and memory organizations, public and private sectors, and speakers of endangered, minority, indigenous languages, as well as non-official languages and dialects, and other experts **gathered** at the International Conference "Role of linguistic diversity in building a global community with shared future: protection, access and promotion of language resources" in Changsha, China, from September 19–20, 2018 **adopted the following Proclamation,**

Committed to the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights (1948) and other internationally recognized legal instruments.

Recalling the Preamble to the Constitution of UNESCO affirms, "that since wars begin in the minds of men, it is in the minds of men and women that the defenses of peace must be constructed" (November 16, 1945) and **reaffirming** that UNESCO is one of the UN system agencies actively involved in promoting linguistic diversity and multilingualism.

Building on other international human rights instruments that support language rights, including the International Convention on the Elimination of All Forms of Racial Discrimination (1965), the International Covenant on Economic, Social and Cultural Rights (1966), the International Covenant on Civil and Political Rights (1966), the Convention on the Rights of the Child (1989), the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990), the Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities (1992), the Convention on the Rights of Persons with Disabilities (2006), and the United Nations Declaration on the Rights of Indigenous Peoples (2007), as well as the work of international human rights treaty and other bodies in this field.

Also recalling other international instruments, including the Universal Declaration on Cultural Diversity and its Action Plan (2001), the Convention for the Safeguarding of the Intangible Cultural Heritage (2003), and the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005), the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003).[1]

Affirming that linguistic diversity policies must first and foremost recognize the dignity of peoples and communities that are the guardians of languages, respect their rights, and build genuine collaborations with them for language protection and promotion, and **having discussed** efforts for language revitalization, protection and promotion, and also heard of cases of continuing threats to indigenous and other languages.

Considering that languages and the traditional knowledge they carry are fundamental both for cultural and for biological diversity and especially critical in the face of climate change and environmental degradation, **as well as considering** that having a distinct language is one factor that qualifies distinct indigenous peoples for the right to self-determination.

Recalling that the overwhelming majority of threatened languages are indigenous peoples' languages, **and supporting** the sense of urgency expressed in UN General Assembly resolution 71/178 that proclaimed 2019 as the International Year of Indigenous Languages.

[1] Paragraph 15 of the Declaration of WSIS, see http://www.itu.int/net/wsis/docs/geneva/official/dop.html, accessed 23 September 2018.

Reasserting the commitments reached in the Outcome Document of the World Conference on Indigenous Peoples adopted by the UN General Assembly in resolution 69/2 on 22 September 2014 and the System-wide Plan of Action[2] as well as national action plans that followed, and the recommendations of the relevant studies of the Expert Mechanism on the Rights of Indigenous Peoples[3] and the conclusions and recommendations of the UN Permanent Forum on Indigenous Issues at its 2016 session (E/2016/43) on the theme "Indigenous languages: preservation and revitalization (articles 13, 14 and 16 of the United Nations Declaration on the Rights of Indigenous Peoples)."

State the Following

- The international community has adopted important international instruments and other policy documents emphasizing the protection of linguistic diversity. In particular, the global attention to language-related issues has been renewed by the United Nations General Assembly in its Resolution 71/178 on the "Rights of Indigenous Peoples" proclaiming 2019 as the International Year of Indigenous Languages.
- The UN Declaration on the Rights of Indigenous Peoples has further advanced the normative content of language rights in its articles 13, 14, and 16.
- There are good examples, where special attention is paid to the protection and revitalization of the languages and cultures of indigenous peoples, and also the protection and inheritance of endangered languages, minority languages, non-official languages and dialects.
- A number of international expert meetings on indigenous languages in recent years that can serve as an inspiration in this field. These special international gathering brought together people across disciplines, policy-makers, academics and practitioners. The Action Plan for organizing the 2019 International Year of Indigenous Languages prepared by UNESCO is another important document in this area.[4]
- The concept of Knowledge Societies, built on the key principles of inclusion, openness, diversity and pluralism. Cultural diversity and multilingualism have a

[2] System-wide action plan for ensuring a coherent approach to achieving the ends of the United Nations Declaration on the Rights of Indigenous Peoples, see http://www.un.org/en/ga/search/view_doc.asp?symbol=E/C.19/2016/5, accessed 23 September 2018.

[3] Study on lessons learned and challenges to achieve the right of indigenous peoples to education (2009), A/HRC/12/33, see http://undocs.org/A/HRC/12/33, accessed 23 September 2018 ; Study on the "Role of languages and culture in the promotion and protection of the rights and identity of indigenous peoples," 2012, A/HRC/21/53, see http://undocs.org/A/HRC/21/53, accessed 23 September 2018; and Study on the "Promotion and protection of the rights of indigenous peoples with respect to their cultural heritage," 2015, A/HRC/30/53, see http://undocs.org/A/HRC/30/53, accessed 23 September 2018.

[4] E/C.19/2018/8.

key role to play in fostering pluralistic, equitable, open and inclusive knowledge societies and are pillars of education for all, access to information and freedom of expression.

- Adopting the human rights-based methodology, namely non-discrimination; interdependence and interrelatedness of all human rights; attention should be placed on the most vulnerable; participation; and accountability of duty-bearers based on international human rights norms.

Conclusions and Recommendations

Conclusion I The protection and promotion of linguistic diversity is crucial to the achievement of the Sustainable Development Goals (SDGs).

Recommendations:

1.1. ***The protection and promotion of linguistic diversity helps to promote Human Development***. The protection and promotion of linguistic diversity is about people's and groups' equal opportunities to quality education and other basic public services, employment, health, social inclusion and participation in society; it is about stopping perpetual illiteracy, unemployment, difficult medical conditions, discrimination and other injustices. Linguistic diversity helps us realize the human development goals such as No Poverty, Zero Hunger, and Good Health and Well-Being. Linguistic diversity is also fundamental to the passing down of distinct and often ancient cultures from older to younger generations.

1.2. ***The protection and promotion of linguistic diversity helps to improve the human potential, action and local initiatives of native speakers in endangered languages, minority languages, indigenous languages, non-official languages and dialects***. This includes use and inheritance of mother tongue from childhood, mother tongue education, access to the internet and other public spaces, and sign languages and braille as the medium of communication among people with disabilities, actions that will improve the chances of Quality Education and Gender Equality.

1.3. ***The protection and promotion of linguistic diversity helps to improve the Environment***. The maintenance of linguistic diversity is closely related to the understanding of the natural ecological environment, to biodiversity, and the way of production and life, that language relies on. In the context of globalization, the protection of linguistic diversity should be closely combined with the protection of societies and communities living both in cities and villages, providing necessary environmental conditions and services for the protection of linguistic diversity, and exploring a win–win sustainable development model for linguistic diversity, environmental protection and economic growth.

1.4. ***The protection and promotion of linguistic diversity helps to improve Economic Development***. Linguistic diversity strives for relatively equal rights for different language users in their educational background, social life and economic development, improves the opportunities of equal and high quality employment for native speakers of endangered, minority, indigenous languages, as well as non-official languages and dialects, in order to promote sustainable economic growth.

1.5. ***The protection and promotion of linguistic diversity helps improve Social Inclusion and Partnerships***. It helps to reduce the gender and social inequality between different native speakers, guarantee the rights for native speakers of endangered, minority, indigenous languages, as well as non-official languages and dialects to receive education, enhance the social inclusion level and social decision-making ability by encouraging them to participate in a series of actions to promote cultural diversity, endangered language protection, and the protection of intangible cultural heritage, such as oral culture, performing arts, social practice, religious folk-custom and festival activities, in order to create a more peaceful and inclusive society to promote sustainable development.

Conclusion II The protection and promotion of linguistic diversity requires the proactive, accountable and measurable participation of all sectors of the international community.

Recommendations:

2.1 ***UNESCO has the important responsibility for advocacy, guidance, promotion, popularization and protection of linguistic diversity in the world.***

- It should monitor the current situation of linguistic diversity in the world, and formulate and implement relevant policies or measures accordingly. It should cooperate with governments and non-governmental organizations, indigenous peoples, public and private organizations, communities and individuals concerned, and support relevant partners in language capacity development.
- It should provide guidance to its Member countries, relevant academic institutions and companies to carry on the protection of endangered languages, actively establish connections with the users and communities of endangered languages including minority languages, indigenous languages and endangered languages overall.
- It should build city networks for the protection and promotion of linguistic diversity and further explores the feasibility of considering linguistic diversity as an important criterion of a sustainable city.
- It should support, encourage and communicate policy-oriented research into systematic approaches to linguistic justice for all, as an integral dimension of sustainable development.

2.2. ***United Nations and other international human rights bodies and mechanisms have the responsibility to continue to monitor the human rights aspects of language rights***. This includes human rights treaty bodies and special procedures, such as the Committee on Economic, Social and Cultural Rights, the Committee on the Rights of the Child, the Special Rapporteur in the field of Cultural Rights and the Special Rapporteur on the Rights of Indigenous Peoples.

- The protection and promotion of linguistic diversity of the world should be included in the relevant development agenda of the United Nations to ensure it plays an irreplaceable role in building a global community with shared future, and in promoting equality, mutual learning, mutual understanding, exchanges, tolerance and peace and human rights around the world.
- It is recommend that the United Nations General Assembly proclaim an international decade of indigenous languages given that the revitalization of the world's indigenous languages requires a sustained effort by states, indigenous peoples and others.

2.3. ***Governments play a leading role in the protection and promotion of linguistic diversity and encourage every Member State to formulate and integrate language policies, language resource management and implementation mechanisms.***

- It is recommended that Member States formulate plans of action according to their national language conditions, and carry out the research and protection of language resources in a timely and effective manner and with the participation of language communities concerned.
- Governments should carry out educational and cultural activities to promote language and cultural diversity and multilingualism, so as to raise people's language confidence and awareness of language protection and inheritance, by involving language communities concerned in the planning implementation and evaluations of relevant programs.
- Governments should involve their language policymaking mechanisms concerned in the planning, implementation and evaluation of language programs primarily with the national knowhow and methodological tradition.
- Action plans should be formulated and implemented on relevant international instruments at country level and with the collaboration of all relevant actors.

2.4. ***National language harmonization institutions, academia, non-governmental organizations, public and private organizations and individuals should be encouraged to protect and promote linguistic diversity through scientific research, media, curricula, arts, cultural production and ICT.***

- All relevant stakeholders, including national language harmonization institutions, academia, non-governmental organizations, public and private organizations and individuals, are encouraged to recognize and raise awareness of the term and value of "language protectors/champions/promoters", whether they are communities, organizations, institutions or individuals who strive for the protection and promotion of linguistic diversity through scientific research, media, curricula development, arts, cultural production and ICT among other means.
- The public, especially the youth including socially marginalized, should be supported to carry out educational and cultural activities of language protection, revitalization and heritage.
- The establishment of a youth organizations and networks is encouraged which will aim at protecting linguistic diversity nationally in the world. We should strengthen talents training for language resources by holding youth forums, sessions and volunteer activities, etc.
- Cities are encouraged to promote local linguistic diversity and transform it into knowledge or productivity, in order to achieve the goal of promoting and protecting linguistic diversity in the context of globalization.
- The international standards on the protection and promotion of linguistic diversity should address an existing gap between encouraging practices that have developed in recent times and current standards.
- The development of a new international instrument with international standards or guidelines is recommended in order to capture the positive practices observed to-date nationally and internationally.
- The governments, private sector, non-governmental organizations, academia and other actors are encouraged to boost funding and other resources for the protection and promotion of indigenous and other threatened languages.
- Academic and indigenous organizations are key to help identifying and providing resources to help combat the loss of indigenous languages by establishing language programs and sharing of linguistic information collected and archived by universities and linguists, while the indigenous communities can advise the best ways to carry out these programs and create more fluent speakers.
- The 2019 International Year of Indigenous Languages is an opportunity to launch a global effort towards an intercultural world. A training-of-trainers program could be established for training of qualified trainers, who would be able to promote sustainable cultural development, working through public or private institutions or civil society initiatives.

- All the above efforts, both international and national, would be greatly helped by the collection and compilation of good practices and methodologies for language revitalization. UNESCO and the Secretariat of the UN Permanent Forum on Indigenous Issues would be well-placed to lead this effort.

Conclusion III It is essential to combine the protection and promotion of linguistic diversity with the development of science and technology.

Recommendations:

3.1. ***Language is an invaluable, non-renewable socio-cultural resource***. The importance to the utilization of scientific and technological achievements should be attached to the promotion of collaboration and international cooperation among peoples and communities of various languages and cultures and to promote exchanges and mutual learning among cultures.

3.2. It is essential to ***set up international standards to protect language resources***, including: (i) technical standards for collection, annotation and documentation of language resources; (ii) co-construction, sharing and utilization standards of language resources throughout the world. International standardization organizations (such as ISO) and professional organizations engaged in language protection, such as universities, research institutes, experts and other stakeholders should formulate and abide by the international standards together.

3.3. Member States, should ***formulate inclusive policies and take active and effective measures making the development of science and technology benefit users of each language*** to ensure that they have equal rights to be educated, inherit their culture and enjoy the service and convenience of technological products.

3.4. Member States, public organizations, academia, non-governmental organizations and civil society, UN entities and associated mechanisms, the private sector, language speakers and others, in collaboration with indigenous peoples and other language communities, should ***promote linguistic diversity within the framework of the global knowledge societies*** and create an internet space with uses and exchanges of multiple languages.

3.5. Member States, public organizations, academia, non-governmental organizations and civil society, UN entities and associated mechanisms, the private sector, and others, in collaboration with indigenous peoples and other language communities should ***use technologies such as Artificial Intelligence (AI) and Information and Communication Technologies (ICT) to promote the creative transformation, innovative development and effective dissemination of language culture*** and seek new ways for the protection and inheritance of endangered, minority, indigenous languages, as well as

non-official languages and dialects. Language is one of the most important resources of Artificial Intelligence, and the development of Artificial Intelligence relies on language resources too.

3.6. Member States, public organizations, academia, non-governmental organizations and civil society, UN entities and associated mechanisms, the private sector, and others, in collaboration with indigenous peoples and other language communities should ***develop advanced tools for collection and analysis of language data***, transliteration and annotation of multi-modal corpus and display and interaction of cultures; we can use speech recognition system and machine translation technology to improve the efficiency of language education and learning.

3.7. The UN entities, intergovernmental organizations, states, governments, non-governmental organizations, public and private organizations, indigenous peoples, communities and individuals coming from global, national to local levels concerned with linguistic diversity are encouraged ***to give attention to linguistic diversity related initiatives and help put them into practice***.

3.8. ***Participate in building the new "World Atlas of Languages"*** in collaboration with language research institutes and relevant universities of China and other countries to establish expert working groups or partnerships, encouraging them to participate in or assist in the development of the regional and national Atlas of Languages within the context of the UNESCO World Atlas of Languages.

3.9. Member States, the private sector, academia and others, in collaboration with indigenous peoples and other language communities should ***promote national infrastructure for the revitalization, reclamation and maintenance of distinct languages*** that can include language revitalization institutes, language commissions, language museums and archival and digitization entities.

3.10. Museum is one of the best carriers to preserve, protect, display and share language resources. International organizations, governments, public or non-governmental organizations, indigenous peoples, private sector, communities and individuals are encouraged to build language museums, especially eco-museums or language-culture experience areas, which are closely integrated with language communities. ***Every information, memory, archive and cultural organization such as museums, whether physical or online virtual, has the potential to play a positive role in the protection and promotion of linguistic diversity***.

3.11. Member States encouraged ***sharing standards, technical tools and advanced concepts***, including open, inclusive and free, for the protection of language resources through project cooperation, academic exchanges or other ways. In particular, the investigation, protection, inheritance and development of languages at countries and regional levels should be encouraged working with research institutions and experts engaged in the protection and promotion of linguistic diversity to visit to carry out visits, projects of cooperation and academic exchanges at country and regional level.

Acknowledgements

The participants expressed their appreciation to UNESCO and the Government of the People's Republic of China for successfully holding this International Conference on the "Role of linguistic diversity in building a global community with shared future: protection, access and promotion to global language resources" from September 19 to 21, 2018, in Changsha, Hunan Province, The People's Republic of China.

PPLRC—Dialects Survey Handbook—Technical Standards

Part 1: Survey Standards

I. Survey Sites

1. One site per county

In principle, only one site will be surveyed for a county where Chinese is spoken (this includes both the "Chinese-speaking only county[1]" and the "county where both Chinese and minority languages are spoken[2]").

Note

Here county-level divisions include counties, autonomous counties, Mongol and Manchu administrative divisions, autonomous Mongol and Manchu

[1] Generally speaking, if a county has 75% or more native Chinese speakers, it is considered a "Chinese-speaking county".

[2] Generally speaking, if a county has 75% or more native minority language speakers, it is considered a "minority-language-speaking county". Counties with lower than 75% fall into the category of "county where both Chinese and minority languages are spoken".

PPLRC—Project for the Protection of Language Resources of China.

Norms and Standards for Language Resources Protection in China,
https://doi.org/10.1007/978-981-99-9967-5_2

administrative divisions, county seats, and urban jurisdictions. This applies to the rest of the text.

2. Two sites per county

In the following cases, two sites in one county will be surveyed:

(1) Counties which contain two dialect groups with wide geographical distributions. Here, the "dialect groups" are classified according to dialect regions or areas. For example, in Pucheng County in Fujian Province, one Wu dialect site and one Min dialect site will be surveyed. In Yueqing City in Zhejiang Province, the Wu dialect is scattered across Taizhou and Oujiang, so one Wu-Taizhou dialect site and one Wu-Oujiang dialect site will be surveyed. If there are more than three dialects, generally the two most dominant ones will be selected.
(2) Areas which historically (from the Qing Dynasty to the present) were situated in two counties, but are now merged into one. For example, Tongxiang City in Zhejiang Province used to belong to Tongxiang County and Chongde County, but in 1958 Chongde County was merged with Tongxiang County (renamed Tongxiang City in 1993).

If more than three counties have been merged, generally the two most dominant will be selected.

If a county has been divided into several parts and merged into separate counties, the selection will be made in the two largest parts.

3. One site for multiple jurisdictions

Multiple jurisdictions belonging to a single metropolitan area are considered collectively as belonging to a single county-level administrative unit. Single jurisdictions that fall outside of a metropolitan area are considered as separate single county-level administrative units. For example, Dongcheng, Xicheng, Chaoyang, Haidian, Fengtai, and Shijingshan within Beijing's metropolitan area are considered collectively as a single county-level administrative unit; the more distant Mentougou, Fangshan, Tongzhou, Shunyi, Changping, Daxing, Huairou, and Pinggu are each considered as separate single county-level administrative units.

4. Survey site selection

In the case of one site per county, it will be situated in the urban county seat (the old one if a new town has been built).

In the case of two sites per county, they must be situated in places outside the county seat with the most local influence.

II. Survey Participants

1. Dialect informants

Each survey site needs to collect data from four types of dialect informants: older males, younger males, older females, and younger females. They are labeled "elderly male dialect informant", "young male dialect informant", "elderly female dialect informant", and "young female dialect informant". These can be abbreviated to "elderly male", "young male", "elderly female", and "young female".

These informants must meet the following requirements:

(1) Older informants must be aged between 55 and 65, younger ones between 25 and 35. The age difference between them (especially between "elderly" and "young male") must be no less than 25 years.
(2) The informant must have been born and raised at the survey site in a monolingual family (both parents and spouse must be locals) and never have lived elsewhere for long. He/she must speak a typical and authentic form of the local dialect.
(3) The older informant must have received a basic primary or secondary school education (college and above is generally not advisable). There are no education limits for younger informants.
(4) Must have a sharp mind, be responsive, and articulate, and speak distinctly.

Exceptions can be made if there are difficulties finding informants.

2. Informants for oral traditions and culture

Data for oral traditions and culture can be collected from different informants. Their eligibility criteria are similar to those for dialect informants, but can be adjusted according to circumstances.

Dialect informants can also be informants for oral traditions and culture if they meet the requirements.

Representative inheritors will be given priority when survey items involve linguistic aspects of content in different Intangible Cultural Heritage Lists.

3. Informants for local Putonghua

At each site, three informants who are native speakers of the local dialect will provide data on Local Putonghua (abbreviated as "LP"). Each is given an evaluation based on the national Putonghua proficiency test: LP 1 for informant 1 is equivalent to level 3A; LP 2 and LP 3 are below the passing grades. LP 2 is close to 3B in the national test and LP 3 is the lowest grade.

An informant for dialect or oral traditions and culture may also serve as an LP informant, if suitable.

4. Overview of survey participants

Table 1 is the overview for each linguistic informant at each site.

Table 1 Overview for survey participants and survey items

Name	Gender	Age	Overview	Pronunciation	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Dialect elderly male	Male	55–65 at time of survey	√	√	√	√	√		
Dialect young male	Male	25–35 at time of survey	√	√			√		
Dialect elderly female	Female	55–65 at time of survey	√				√		
Dialect young female	Female	25–35 at time of survey	√				√		
Informants for oral traditions and culture	Non required	No age limit	√					√	
LP 1	Non required	No age limit	√						√
LP 2	Non required	No age limit	√						√
LP 3	Non required	No age limit	√						√

III. Survey Contents

1. Overview

Survey contents include overview of the survey sites, descriptions for informants, fieldworkers, survey situation, and other information regarding the survey.

2. Pronunciation

(1) Pronunciation (including tones, initials and finals)
(2) 1000 characters.

3. Vocabulary

1200 words and phrases.

4. Grammar

50 examples of grammar.

5. Discourse

(1) Narration: Informants select one or more topic(s) and talk for 20 min on each.
(2) Dialogue: Informants select one or more topic(s), and engage in a dialogue for a total of 20 min.

6. Oral traditions and culture

This section includes spoken forms such as "ballads", "stories", and "self-selected items". "Stories" include the "Set Story[3]" and "Other Stories". The time for this whole section is 20 min.

Collect survey items that involve linguistic aspects of content in different Intangible Cultural Heritage Lists.

7. Local Putonghua

(1) Each informant tells a "Set Story" for no less than 3 min.
(2) Read 2 passages out loud.

See Table 1 for the survey contents for a particular informant.

IV. Fieldwork Methods

(I) Overview of Survey Contents and Methods

Tables 2, 3, 4, 5 and 6 summarize survey contents and methods by informant type.

[3] "Story of the Cowherd and the Weaver Girl".

Table 2 Dialect elderly male

	Overview	Pronunciation: phonology	Pronunciation: single characters	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√	√	√	√	√			
Audio recording			√	√	√	√		
Video recording			√	√	√	√		

Table 3 Dialect young male

	Overview	Pronunciation: phonology	Pronunciation: single characters	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√	√	√					
Audio recording			√			√		
Video recording			√			√		

Table 4 Dialect elderly and young female

	Overview	Pronunciation: phonology	Pronunciation: single characters	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√							
Audio recording						√		
Video recording						√		

Table 5 Informants for oral traditions and culture

	Overview	Pronunciation: phonology	Pronunciation: single characters	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√						√ (only record the first sentence for each item)	
Audio recording							√	
Video recording							√	

Table 6 LP 1, 2 and 3

	Overview	Pronunciation: phonology	Pronunciation: single characters	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√							
Audio recording								√
Video recording								√

(II) Fieldwork Procedures

1. Overview

(1) A team of fieldworkers will survey each site. The team must include those who are familiar with audio and video recording, photography, and computer technology.

Alternatively, each project in different regions can form a special team for audio/video recording at each survey site. In other words, the dialect survey fieldwork and audio-visual recording can be conducted by two separate teams.

(2) Center for the Protection and Research of Language Resources of China at Beijing Language and Culture University[4] will provide each survey site with a "Survey Site File Package" containing "Software and Samples" and "Electronic Documents to be Submitted".
(3) Each survey site uses one *Survey Handbook*. (All contents that need to be surveyed at the same site will be recorded in this same *Survey Handbook*.)
(4) All sites must be surveyed in the field. Audio/video recording may be conducted at a different location as appropriate.

2. Preparation

(1) Contact the local authority.
(2) Select linguistic informants, which can be conducted in a centralized manner.

Explain to the informants the "Survey Standards" and the "Survey Item Overview" to familiarize them with how to proceed and prepare.

(3) Select a location for recording and make appropriate preparations.

3. Fieldwork activities

(1) Complete the "Overview" section of the "Survey Item Overview". For items with no content, indicate "N/A". (If necessary, ask the local authority for help.)
(2) Complete the sections entitled "Pronunciation", "Vocabulary", and "Grammar" under the "Dialect Elderly Male" category of the "Survey Item Overview".
(3) Complete the section entitled "Pronunciation" under the "Dialect Young Male" category of the "Survey Item Overview".
(4) Complete the section entitled "Oral Traditions and Culture" in the "Survey Item Overview", except that the "Set Story" subsection is not required.
(5) It is not required to complete the "Discourse" and "LP" sections, but the informant must familiarize himself/herself with the survey content in advance.

[4] refered to as CPRLRC.

(6) Using the survey results provided in the "Survey Item Overview", fill in or edit the content of entries in the "Recording Log" such as "Single Characters", "Vocabulary", "Grammar" and "Discourse: Narration" for "Dialect Elderly Male", "Single Characters" and "Discourse: Narration" for "Dialect Young Male", "Discourse Narration" for "Dialect Elderly Female" and "Dialect Young Female", "Discourse Dialogue" for "Dialect Multiple People", and "Oral Traditions and Culture" for "Informants for Oral Traditions and Culture". It is not required to edit the content in the LP 1, LP 2 and LP 3 sections in the "Recording Log". All recording log templates are provided by CPRLRC. (They can be found in the "Survey Site File Package\Electronic Documents to be Submitted\Templates\Audio Recordings" folder.)

(7) Use the recording software and the recording log. Audio and video recordings must be conducted simultaneously. (Recording software programs Byly, YBSL, and Audacity as well as their instruction manuals are located in the "Survey Site Package\Electronic Documents to be Submitted\Recording Software" folder.)

4. Special considerations

(1) Pronunciation

a. After sample characters in the "Pronunciation" section, only the initials, finals, and tones are recorded. (All sample characters in the "Pronunciation" section will be repeated in the subsequent "Single Characters" section.)

A preliminary system of initials, finals, and tones can be developed, which can be further expanded based on vocabularies and other materials. The initials and finals can be ordered as in the *Syllabary of Dialect Pronunciations of Chinese Characters* (Language and Culture Press, 2003) compiled by the Office for Teaching, Education and Research of the Department of Chinese Language and Literature, Peking University.

Each initial, final, and tone should come with sample characters. (Sample characters for each tone category are directly grouped together in the Survey Item Overview; all characters surveyed for the purposes of initials are written after their initials in the chart; all characters surveyed for finals are written after their finals in the chart.) Tone categories should be named according to commonly used rules in Chinese dialectology. For those that derive from tone splitting, phonetic details should be added to their names, e.g., "yinping" (voiceless initial Ping tone), "quan yinping" (all voiceless initial Ping tone), and "wei yinping" (voiceless initial Ping tone with finals). For a category that is a merger of multiple tones, if the category can be determined, use this as the category name. For example, when the Shang tone voiced obstruent is merged into the Qu tone in Beijing dialect, the tone is referred to as the Qu tone.

However, if the tone category after merging cannot be determined, its name follows the order "Ping, Shang, Qu, and Ru" (i.e., if the merger includes both voiceless Ping and Qu tones, but the category cannot be determined, use the "yinping"

(voiceless initial Ping tone) as its name because it comes before the Qu tone in the sequence), and add a comment of "tone category to be determined" in the "Notes" column.

On the "Pronunciation Description" page, provide details of the phonetic values of initials, finals, and tones, as well as rules for two-syllable tone sandhi, er-suffixation, diminutives, and other major phonetic alterations. Other phonemes of initials, finals, and tones that are not listed in the *Survey Handbook* are also recorded here. For items with no applicable content, indicate "N/A". The "Pronunciation Description" section can be filled out electronically, printed and attached to the *Survey Handbook*.

b. Take note of the "Special Conditions" column. (Phrases "note initials", "note finals", and "note tones" suggest that the character may have special pronunciations for them.)
c. Take note of "one character with multiple pronunciations", such as literary and vernacular (colloquial).
d. If a character is not spoken in the dialect, indicate "N/A".

(2) Vocabulary

a. Record the Chinese characters first and then the phonetic symbols. Always repeat the written Chinese characters, even if they are pronounced the same way in the dialect.
b. Take note of the "Special Conditions" column. Check that the meaning and usage in the dialect are accurate, and provide explanations and examples if necessary.
c. Take note of "language expressions without corresponding physical objects". For example, in some places, the actual "rice plant" does not exist but there is a word for it. In this case, if the term is an authentic colloquial expression in this dialect, record it and indicate "language expressions without corresponding physical objects". If the expression clearly exists only in written form or is foreign, do not record it.
d. Take note of "different words or phrases used to express the same concept." These should be arranged in descending order according to their naturalness and frequency of usage, separated by a slash "/".
e. If a lexical item is not spoken in a dialect, indicate "N/A".
f. Take note of the orthography in a dialect (Chinese characters are used to represent dialect data).

(3) Grammar

a. Record the Chinese characters first and then the phonetic symbols. Always repeat the Chinese characters, even if they are pronounced the same way in the dialect.
b. Take note of the explanations of the sample sentences. Check that the meaning and usage of the sentence in the dialect are accurate, and provide explanations if necessary.

c. Take note of "different sentences used to express the same concept". These should be arranged in descending order according to their naturalness and frequency of usage, separated by a slash "/".
d. Note written forms in the dialect (Chinese characters should be used).

(4) Discourse

a. Allow some time for the informants to familiarize themselves with the Narration topics. Make sure they use their dialect to narrate naturally and are as specific as possible.
b. The Dialogue task should be completed by at least three out of the four informants (including Dialect Elderly Male and Dialect Young Male).
c. If necessary, the fieldworker can also briefly interject.
d. The recording can be longer than the specified time, but not shorter.

(5) Oral traditions and culture

a. Record the first sentence only for each item in the "Survey Item Overview" (write Chinese characters only instead of phonetic symbols).
b. For the "Set Story", the informants will be given time to become familiar with it and prepare accordingly. They must retell it naturally in their dialect for recording. They may paraphrase the story or lengthen it but are not allowed to read from any written text.
c. In the Oral Traditions and Culture section, there is a subsection "Self-selected Items" used to record spoken forms that do not fall into the categories of "Ballads" or "Stories".

(6) Local Putonghua

a. For the "Set Story" task, the informants will be given time to become familiar with the story and prepare. They must retell the story naturally in Putonghua for recording. They may paraphrase and lengthen the story, but are not allowed to read from any written text.
b. For the "Read Out Loud" task, the informants will be given time to become familiar with the text, but they may not refer to a dictionary to check pronunciation.

(7) Recording log

a. Fill in or edit the content in the "Dialect" column as necessary (shown in a colored background) in each recording log. For simplicity, the items surveyed have been copied to the "Dialect" column, so that fieldworkers only need to "edit" the content based on the actual dialect usage.
b. Single character recording log: Based on the survey results, record spoken Chinese characters (without phonetic symbols) in the "Dialect" column, and delete the unspoken ones and indicate "N/A". For characters with more

than one pronunciation, use a slash "/" between them, and write them in the form of "多 duo/多 duo" or "拖 tuo/拖 tuo/拖 tuo" (one phonetic symbol per character[5]).

c. Vocabulary recording log: Edit the Chinese characters in the "Dialect" column based on the survey results. For "spoken characters that have no written forms", use "#1", "#2" and "#3" plus phonetic symbols, for example, "#1[xat2]" (see "IX-(II)-7"); for items that do not exist in the dialect, indicate "N/A". If there are multiple terms or phrases to express the same concept, use a slash "/" to indicate variants, for example, in the form of "太阳 taiyang (sun)/老爷儿 laoyer (sun)" or "日 ri (day)/日头 ritou (day)/日头公 ritougong (day)".[6]
d. Grammar recording log: Based on the survey results, edit the Chinese characters in the "Dialect" column. For "spoken characters that have no written forms", use phonetic symbols such as "#1", "#2" and "#3". If there are multiple ways of expressing the same concept, use a slash "/" to indicate variants, for example, in the form of "尔平常烟吃弗个? Er pingchang yan chi fo ge (What type of cigarettes do you usually smoke?)/尔平常吃烟弗个? Er pingchang chi yan fo ge (What type of cigarettes do you usually smoke?)".[7]
e. Recording log for discourse (narration and dialogue): In the recording logs for "Discourse Narration" and "Discourse Dialogue", delete content about topics the informants did not mention in the "Dialect" column and indicate "N/A".
f. Recording log for oral traditions and culture: Based on the survey results, fill in the "Dialect" column with the Chinese characters of the first sentence of each item. If there is no content to fill, indicate "N/A" in the "Dialect" column.

(8) Audio and video recording

Choose one of the following methods to record audio and video on a case-by-case basis.

a. Fieldworkers themselves record both audio and video. This requires a team which can handle all the technical details.
b. Audio and video recording is done by professionals. For this method, the fieldworker team assigns a member to participate in the recording process to ensure content accuracy.

(9) Visual guide

[5] Here the phonetic symbols for "多" and "拖" are used to indicate the pronunciation of modern standard Chinese.

[6] Here the phonetic symbols are used to indicate the pronunciation of modern standard Chinese.

[7] Here the phonetic symbols are used to indicate the pronunciation of modern standard Chinese.

Written texts may be interpreted in different ways by participants from different dialect regions, which may bias their answers. A *Visual Guide* is thus provided with this handbook to increase survey accuracy and simplify the process. Lexical items are depicted in pictures or animated form or animations to help informants better understand the survey. The pictorial presentation is not only more direct, but also encourages informants to provide more dialect terms and expressions. The *Visual Guide* can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/) and uploaded to YBSL for future use.

Notes

1. **Content recorded by hand must be written directly into the *Survey Handbook*. Indicate the dialect types on its inside cover.**
2. **All final recordings and videotaping must be concentrated and conducted together, after all other survey tasks are completed.**
3. **All audio files and videos must be reviewed in a timely manner to ensure quality.**
4. **To avoid duplicating work, the first sections of audio and video files should be reviewed by the research project leader.**
5. **At the end of the survey, request informants to sign a letter of authorization regarding all survey-related information. Survey participants who have been recorded both in audio and visual formats must also sign written authorizations where necessary.**

V. Audio Recording

(I) Recording Devices

Two recording options are recommended. "Device Option 2" applies for those more proficient with computer recording devices. Other device models are also acceptable provided recording parameters and quality are met.

1. Device Option 1: laptop + professional recording microphone

(1) Laptop: use low-noise laptops, such as Lenovo ThinkPad X, T series (more than 2 GB memory; USB 2.0 ports; Windows XP, Windows 7 or Windows 8 operating system).
(2) Microphone (cardioid, omnidirectional; with built-in sound card): Samson C03U.
(3) Pop filter: Alctron MA016.
(4) Microphone stand: Takstar NB-102.

2. Device Option 2: laptop + professional USB external sound card + professional recording microphone.

(1) Laptop: same as Device Option 1.
(2) External sound card: Tascam US-144MKII.
(3) Primary microphone (headset, cardioid): AKG C520.
(4) Secondary microphone (desktop, omnidirectional) with base: AKG CK92 (AKG Blue Line) secondary microphone, AKG SE300B base.
(5) Monitor headphones (for fieldworkers): AKG K99.

Note: Cardioid microphones work better for a single person speaking, while omnidirectional microphones work better for exchanges between multiple persons. Users can select the pickup patterns using the Samson C03U's pattern selection switch: middle for Cardioid, right for Omni, and left for Fig. 8. (In Cardioid pattern, make sure the "Samson" logo faces the informant.)

(II) Preparations

1. Location

A professional recording studio is recommended.

If none is available, find a quiet room. Close doors and windows, and turn off electric fans, air conditioners, fluorescent lights, cell phones, and other electrical appliances.

For performances in the Oral Traditions and Culture section (e.g., opera or drama) recording may be done where the performance actually takes place. The best sound quality should be ensured. If separate audio recording is not possible, the audio may be extracted from the video file and saved as a separate audio file.

2. Microphone

Install the microphone stand, set up the pop filter, and place the microphone behind it. If there is no pop filter, do not place the microphone directly in front of the informant's mouth, so as to avoid "plosives" during recording. As much as possible, keep a fixed distance and angle between the informant's mouth and the microphone.

3. Sound card

For "Device Option 2," disable the computer's built-in sound card. For example, in Windows XP, open "Control Panel," go to "Performance and Maintenance\System\Hardware\Device Manager\Sound, Video and Game Controllers," and open "Sound, Video and Game Controllers." Right-click on the sound card (the name varies from computer to computer, e.g., SoundMAX Integrated Digital HD Audio) and select "Disable".

Note: After the recording session is over, enable the built-in sound card again by following the above instructions and selecting "Enable" instead of "Disable".

4. Prompts during recording

Tell the informants in advance what prompts will be used for them to "Start Recording" or "Stop Recording", for example, by holding up a sign that says "Start" or "Stop", or using hand gestures.

5. Trial recording

To help informants understand the recording process and its requirements, and to test the audio effects, fieldworkers should ask the informants to record some of the survey items first, and then start the formal recording session. In particular, remind them to avoid mouth noises such as lip smacks, loud swallowing, and heavy breathing.

(III) Recording Software

Recommended recording software is Byly (Beiyu Luyin) or YBSL (which can be set to record audio only). Audacity is used to monitor the audio and edit the files. It can also be used for recording if necessary. Other recording software, such as Adobe Audition, Cool Edit Pro, Sonar LE (included with the Samson C03U), and Cubase LE 4 (included with the Tascam US-144MKII), can be used as long as the format and quality of the recording meet the specified requirements. Note that some hardware may not always be compatible with the recording software. If there are problems, either adjust the settings, or replace the software or hardware as soon as possible.

1. Byly (Beiyu Luyin)

Byly (Beiyu Luyin) is free recording software that is simple and user-friendly. It works for data collection of general language surveys, particularly of Chinese dialects. Byly (Beiyu Luyin) has the following features:

(1) Records survey items one at a time, and displays the waveform during recording.
(2) Automatically names and saves each audio file.
(3) Can automatically overwrite a file if an item is re-recorded.

The software can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

2. YBSL

YBSL has all the functions of Byly but also provides additional ones such as automatic recording, voice quality detection, tagging, and image association. It can also be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

3. Audacity (Note: This handbook uses the win-unicode-1.3.12 version to illustrate.)

Audacity is a free and widely used editing software for recording and audio files. Its user interface supports Chinese. It runs stably in Windows XP, Windows 7, Windows 8, and other operating systems. Audacity can be used to test background noise, record live sound, add labels and markers, edit recording files, batch trim audio files, and remove noise.

(IV) Recording Parameters

1. Basic parameters

Sound channel: Mono.
Sample rate: 44,100 Hz.
Sample format: 16-bit.
Audio format: Windows PCM (*.wav).

In Byly (Beiyu Luyin) and YBSL, these are default settings.

Other recording software must be manually configured. In Audacity, click "Edit>Audacity Preferences".

(1) Configuring recording devices and sound channels

For "Device Option 1", click "Devices" and check that the "Playback Device" is the computer's built-in sound card, and the "Recording Device" is Samson C03U. (These are default settings so there is no need to reset. If the option Samson C03U does not appear, reboot the operating system, or uninstall the drivers of other external sound cards. To avoid problems, disable all other built-in recording devices first.) Select "Mono" from among the options for "Channels". (See Fig. 1.)

For "Device Option 2", click "Devices". Check that the "Playback Device" and the "Recording Device" are both set to Tascam US-144MKII, and select "Mono" from among the options for "Channels". (See Fig. 2.)

(2) Setting sample rate and format

Click "Quality" and select "44100 Hz" and "16-bit" in the drop-down menu to the right of "Sampling". (See Fig. 3.)

(3) Setting Meter/Waveform dB range

Click "Interface" and select "−96 dB (PCM range of 16 bit samples)" in the drop-down menu to the right of the "Meter/Waveform dB range". (See Fig. 4.)

(4) Set the default view mode

Click "Track" and select "Waveform (dB)" in the drop-down menu to the right of "Default View Mode".

After completing these settings, click "OK".

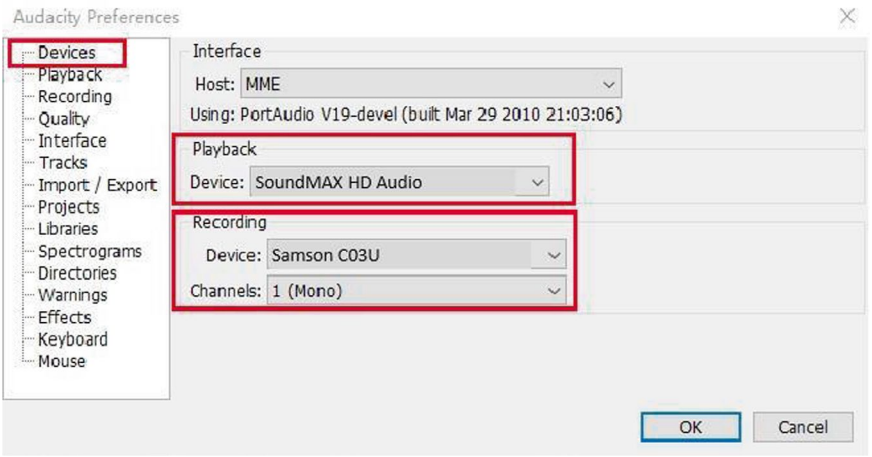


Fig. 1 Device Option 1: configuring recording devices

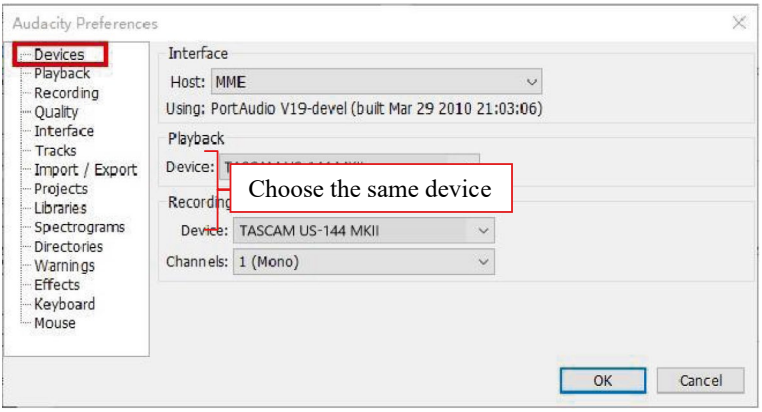


Fig. 2 Device Option 2: configuring the recording devices

2. Background noise and voice volumes

Background noise: must not be larger than "−48 dB", and preferably below "−60 dB".

Voice volume: maximum value must be "−18 dB" or more, preferably not over "−6 dB".

Before starting the formal recording, background noise and voice volumes need to be tested to ensure recording quality. If neither meets requirements, either remove noise sources or adjust the input volume of the device. Here is an example from Audacity.

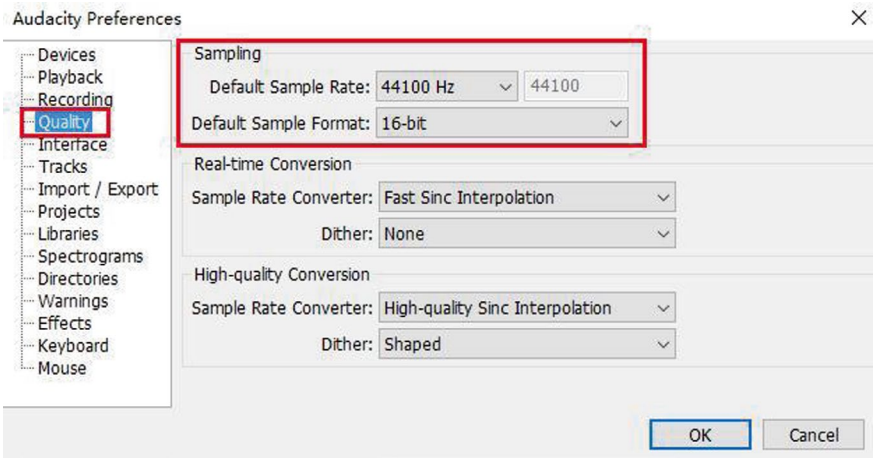


Fig. 3 Setting sample rate and format

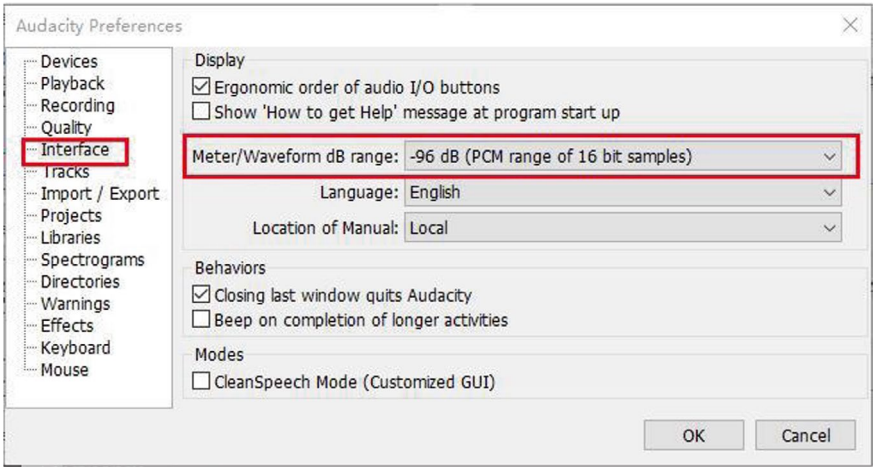


Fig. 4 Setting the Meter/Waveform dB range

(1) Adjusting the volume slider

Launch Audacity, move the mouse to the right end of the slider where the microphone icon is located. The cursor will take the shape of a left–right arrow. (See Fig. 5.)

Hold down the left mouse button and drag the slider to the right, so that it fills the whole window. The scale "−72", "−60" etc. will appear. (See Fig. 6.)

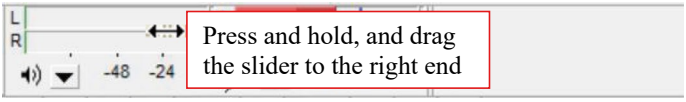
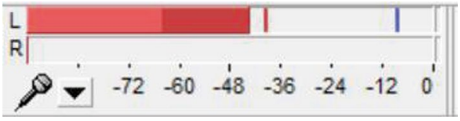


Fig. 5 Adjusting the volume slider

Fig. 6 The effect after adjustment



This allows testing of both background noise and voice volumes. Note that most recording software uses negative intervals to indicate the volume range, ranging from "$-\infty \sim 0$", with "0" as the upper volume limit, i.e., the maximum value.

(2) Testing the volume of background noise

Click the indented area on the upper right of the microphone icon. When the dark red indicator bar moves to the right toward 0, the background noise becomes louder; when closer to the left, it becomes softer. (See Fig. 6.) To ensure sound quality, best to set the background noise volume below "−60" (e.g., "−72") and no greater than "−48". If it is greater than "−48" (e.g., "−36"), the noise will be too loud, and the noise source must be identified and removed, or the input volume lowered to an appropriate level.

(3) Testing the voice volume

Before starting the formal recording, first record a few words, phrases, or sentences spoken by the informant. When the dark red indicator bar moves to the right toward 0, the volume gets louder; when closer to the left, it becomes softer. (See Fig. 6.) For proper sound quality, the maximum volume should be set at "−18" or more (e.g., "−12", "−9"). If this is set too low (e.g., "−36"), quality will be affected because the voice signal will be too weak. (However, some sounds such as voiceless ones are naturally weak, so adjust accordingly.) If the volume is greater than "0", it will be too loud and cause clipping distortion.

(4) Adjusting the input volume

For "Device Option 1", the input volume needs to be adjusted through the computer's built-in audio system. Take Windows as an example. (See Fig. 7.) Open the "Control Panel" and go to "Sound". At this time, the "Default Device" in the "Recording" box should be "Samson C03U". Click "Default Device" in the "Recording" box and slide left and right the volume bar to adjust the volume accordingly.

For "Device Option 2", the input volume needs to be adjusted on the external sound card (Tascam US-144MKII). (See Fig. 8.) When the PHANTOM, MIC

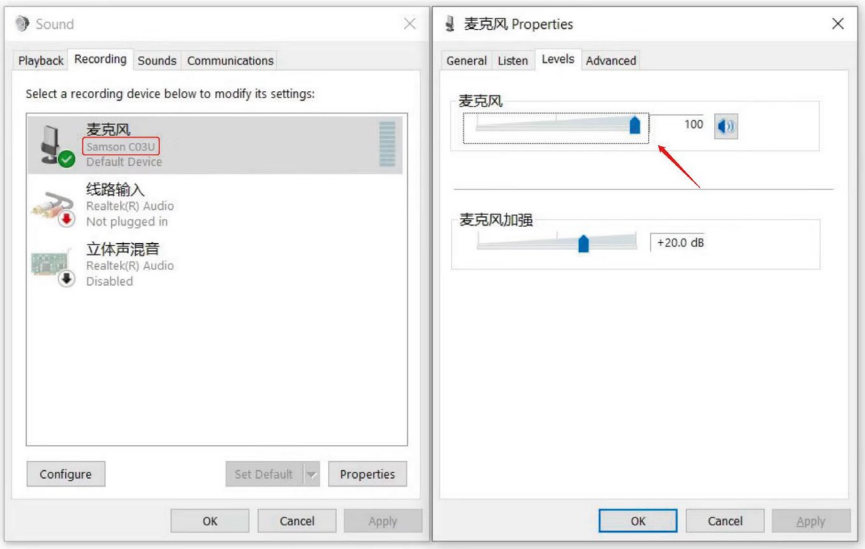


Fig. 7 Adjusting the input volume on the computer

LINE and MONO switches are ON and the microphone is connected to the left or right channel, the INPUT knob can be used to adjust the input volume. If the microphone is connected to the left channel, rotate INPUT L to adjust (indicated by a box in the figure); if the microphone is connected to the right channel, rotate INPUT R to adjust. When the indicator line on the INPUT knob moves towards "MIC", the input volume rises; when it goes the other way, the volume falls.

Increasing the input volume in this way will also increase the background noise volume, so it is necessary to find a balance.

Adjusting the voice volume without changing the background noise volume is possible by adjusting the distance between the microphone and the informant's mouth, or by asking the informant to adjust the volume of his/her voice.

During recording, the fieldworker should regularly check the position of the microphone to avoid volume fluctuations due to the informant's distance or loudness of speech.

(V) Recording Methods

This section describes how to use Byly (Beiyu Luyin) and Audacity. See the *Audacity Manual* in the "Survey Site File Package\Software and Samples\Recording Software\Audacity" folder.

Follow the steps below to use Byly (Beiyu Luyin) (see Fig. 9):

Fig. 8 Adjusting the input volume on an external sound card

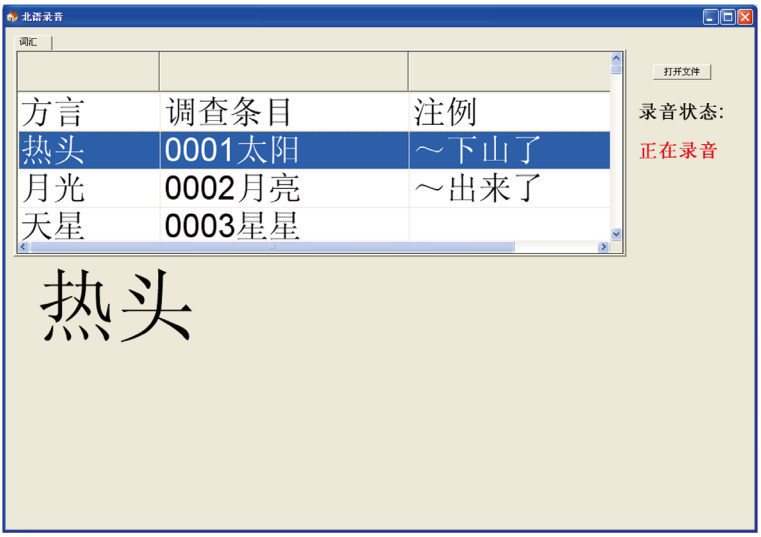


Fig. 9 Recording interface. “热头”(rè tóu) is a Chinese dialect expression for “sun”

1. Launch Byly (Beiyu Luyin) software (byly.exe). Click "Open File", and upload the recording log.
2. Select the row indicating the item that needs to be spoken and recorded. (At this point, this row appears in blue. Under the log table, a large word is displayed, indicating the same current item to be recorded.)
3. Press the "Enter" key to start recording. (At this point, the "Recording Status" shows "Recording in progress" in red, and its waveform is displayed.)
4. After recording one item, press the "Down Arrow ↓" to go to the next and continue recording.
5. When finished, press "Enter" to stop. (The "Recording Status" shows "Recording stopped" in red.)
6. If only one item needs to be recorded or re-recorded, select that item, press "Enter" to start, and press "Enter" again to stop.

Notes

1. **After the large text below the log table appears, wait one second before the informant starts speaking. Again, after the speaking ends, wait one second before moving to the next row or stopping recording altogether.**
2. **Recommended software environment is Windows XP, Windows 7, or Windows 8 with Office 2003. Do not open other recording software or audio players while this software is being used.**

(VI) Recording Files

1. All recording files are in Windows PCM (*.wav) format.
2. Contents for each survey item should be saved in a separate file.

In "Discourse", each narrated topic is saved in a separate file, as is each topic in a dialogue. In "Oral Traditions and Culture", each ballad, story and self-selected item is saved in a separate file. In "LP", each rendition of the "Set Story" is saved in a separate file, as is each passage that is read out loud. In "Grammar", if a survey item includes two sentences "a" and "b", they must be saved in one file, not separate ones.

If a survey item includes more than one expression, they must be saved in one file, not separate ones.

During the recording for a single file, try not to break off in the middle. (Informants may pause but shooting should continue.) Do not split into multiple files. If this happens, the files must later be edited and combined into one.

3. Survey items with no applicable content to fill out (i.e., those marked as "N/A" in the "Dialect" column of the recording log) need no recording.
4. Start recording and leave 1–2 s blank before starting the speech. Do the same at the end.

5. Sample recordings can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VI. Video Recording

1. Recording Devices

(1) Camera: Sony, Canon, Panasonic, and other top-tier brands of full HD digital cameras are recommended. However, any camera model may be used as long as the technical specifications and video quality meet the requirements.
(2) Microphone: Wired or wireless microphone compatible with the camera. (For best sound quality use an external microphone.)
(3) Tripod: compatible with the camera.
(4) HD camera (brand optional): for example, Logitech C930e.

2. Recording Requirements

(1) Use a tripod to fix the camera, adjust its height, and point the lens at the upper half of the informant's body.
(2) Place the microphone in front of the informant in an appropriate position, or clip it to his/her collar.
(3) Shoot long shots if possible. If zooming is unavoidable, use an optical zoom lens rather than a digital one.
(4) The backdrop should be uncluttered and even. Use pure blue but not too dark.
(5) Choose a place with good light. Avoid harsh shadows on the background cloth (backdrop plate). The informant should face the camera. Avoid back lighting which will put his/her face in shadow.
(6) Performances for items in "Oral Traditions and Culture" (e.g., opera or drama) can be recorded on site without setting up a backdrop plate.

3. Recording Methods

Below are several methods for video shooting. Those who are proficient with post video editing can choose to use a camera to record multiple items in one continuous shoot. In fact there are no strict rules about how to shoot the videos so long as their parameters and quality meet the specifications for the audio quality.

(1) Use YBSL

YBSL can be used to record language survey items. Version 1.0 has the following features.

a. Can record video and audio simultaneously. Can automatically split audio and video files, name and store them separately. Supports 1920 * 1080/25 fps

HD video format (which requires HD cameras, such as Logitech C930e HD camera).

b. Supports importing file formats of Excel 2003 and above (*.xls and *.xlsx). International phonetic symbols, labeling information and other content can be directly edited and saved to the source Excel file.
c. Can record continuously multiple survey items, both manually or automatically.
d. Can monitor audio recording effects against the customized parameters. Substandard audio files can be automatically flagged in the source Excel file.
e. Can record audio alone or record both video and audio together.
f. The *Visual Guide* provided with this handbook can be uploaded to YBSL to collect both audio and video data.

To use YBSL for high-definition recording, your computer hardware and software must meet the following requirements:

a. Software: A 64-bit Windows 7, Windows 8, or Windows 10 operating system with pre-installed Microsoft's .net Frameworks 4.0 (or above); Office 2003 or above.
b. Hardware: YBSL has high requirements for hardware in order to collect and encode HD videos. Hardware should be a Core i7 or above non-low voltage CPU (specific models are 4600M/3610QM/4700MQ/4702HQ/5700HQ/6700HQ or above), DDR3 4G memory or above, hard drive speed of 7200 rpm or above (solid state drive is highly recommended), and no less than 3 USB ports. Lenovo (including ThinkPad and other Lenovo models), Dell and other top-tier brands are recommended.

Details on how to use YBSL are included in the Help file (Help.chm) that comes with the software. YBSL can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

(2) Shooting items one by one

Record each survey item and save it in a separate file. See below for step-by-step instructions:

a. The fieldworker first reviews the pronunciation of each survey item with the informant. After the correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts the recording and gestures to the informant to speak directly to the camera.
b. When the speaking is finished, the recorder operator stops recording and gestures to the camera operator who stops shooting. The fieldworker then reviews the pronunciation of the next survey item with the informant, and the process is repeated.

Recording items one by one will generate multiple video files. To facilitate later data arrangement, it is recommended that before recording the first item in a series of items (e.g., a set of 10 or 20 items), a separate video file be made to record that first item number (e.g., the camera operator could read out the number or write

it on a piece of paper and save it as a separate file). This acts as a marker for the series' location. (These marker videos can later be deleted in post editing.)

(3) Shooting multiple items together

Multiple survey items can be recorded in one take and stored in one file. There are two ways to accomplish this:

First, the informant and the recorder operator view the same laptop screen together. See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the laptop screen and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can be deleted later in post-production editing.) Make sure that the informant's face, the prompts on the computer screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

Second, the informant views a separate computer monitor or projection screen (i.e., a separate computer monitor or screen that is plugged into the laptop). See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the separate monitor or screen, and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can later

be deleted in post-production editing.) Make sure that the informant's face, the prompts on the separate computer or projection screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

4. Video Files

(1) The highest quality setting of the shooting devices should be used, and shooting must be done in full HD mode, and shooting must be done in full HD mode. Parameters must be no less than 1920 × 1080/50i (or 25p)/15,000 kbps. The specific file format depends on what is available with the camera device, such as *.m2ts, and *.mpg.
(2) Each survey item should be saved in a separate file.

In "Discourse", each narrated topic is saved in a separate file, as is each topic in a dialogue. In "Oral Traditions and Culture", each ballad, story and self-selected item is saved in a separate file. In "LP", each rendition of the "Set Story" is saved in a separate file, as is each passage read out loud. In "Grammar", if a survey item includes two sentences a and b, they must be saved in one file, not separate ones.

If a survey item includes more than one expression, they must be saved in one file, not separate ones.

During the shooting for a single file, try not to break off in the middle. (Informants may pause but shooting should continue.) Do not split into multiple files. If this happens, the files must later be edited and combined into one.

If multiple items are shot together without stopping, the recording will need to be divided into separate files during subsequent data collation.

(3) Survey items with no applicable content to fill out (i.e., those marked as "N/A" in the survey) need no shooting.
(4) In the video file, wait 1–2 s before each speech starts and after it ends. Avoid video and audio out of sync, visible flickering, and noticeable noise and echo.
(5) Sample videos can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VII. Photography

1. What to photograph

(1) Portrait photos of informants
(2) Survey sites
(3) Objects and events with local characteristics

2. Photography devices

Digital cameras, preferably Canon, Nikon, or other top-tier brands of digital SLR cameras of at least 12 megapixels.

3. Photo file format

(1) Set to the highest quality format (i.e., the highest resolution and definition). The files must be in *.jpg format, ideally with a resolution no less than 4368 × 2912 pixels.
(2) Sample photos can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VIII. Notation

(I) Font and Format

1. All phonetic symbols in the templates are entered in IpaPanNew font. Tone pitch values following the phonetic symbols are also entered in IpaPanNew font. No need to change fonts. If phonetic symbols cannot be displayed in this font, use the Unicode encoding system.
   All other characters are in Song font.
2. All zero initials are indicated by its symbol "Ø" and cannot be left blank. For example, in the Beijing dialect: 王Øuaŋ35.
3. Use "h" (not in superscript) for the aspiration symbol, rather than "p^h" or "p°". Do not use superscript to annotate the numbers that indicate tone pitch. For example, in the Beijing dialect: 怕(pa) pha51 (fear pha51).
4. For phonetic units such as "m n ŋ l", which can alone form syllables, do not add short vertical lines above or below.
5. Enter "ts" as two separate symbols, that is, "t" and "s". The same applies to affricate consonants such as "tʂ tɕ". In the case of "ã", enter two separate symbols "a" and the nasal vowel "˜". The same applies to other nasal vowels. Use "g" instead of "ɡ". Use vowel "ɤ" instead of "ɣ". Use the phonetic symbol "ː" instead of the colon ":" for long vowels.
6. Do not add additional symbols to phonetic symbols, such as "d̥". The actual phonetic values can be explained in detail in the "Pronunciation Description" section of the "Survey Item Overview". Note that nasalized and long vowel symbols are not additional symbols.
7. All tone pitches are indicated in numbers, for example, in the Beijing dialect: 妈ma55 | 麻ma35 | 马ma214 | 骂ma51. If there is a break in the middle of a tone, use "0", e.g., in the Yugan dialect: 割koʔn304 | 白pheʔŋ303.
8. All syllables are hyphenated without blank spaces in between. For example, in the Beijing dialect: 下雨ɕia51Øy214.
9. Whenever possible, follow commonly used notation standards of Chinese dialectology. For example: vowels [n] and [n̩] should be separated; when [tɕ]

initials are spelled together with a class of finals that begin with i, they should be recorded with the symbols [tɕia], not [tɕa], etc.; when [k] initials are spelled together with a class of finals that begin with u, they should be recorded with symbols [kua], not [kwa] and [k^{w}a].

(II) One Character with Multiple Pronunciations

1. Follow these instructions when noting the pronunciation of single characters with multiple pronunciations:

(1) These characters exist in literary and vernacular (colloquial) in the different varieties of Chinese, so annotate them after the syllables as "colloquial" or "literary". (In the template table, write "colloquial" or "literary" in the corresponding "Notes" column.) The "colloquial" syllables are arranged first before the "literary" ones. (This ordering also applies to their recording, which will be saved in the same file.) For example, in the Beijing dialect: 学 (xue) ɕiau35 白 (colloquial)/ɕyɛ35文 (literary).

(2) For free reading variants of a character, annotate the syllable by adding "又" (variant). (In the template table, "又" (variant) is written in the corresponding "Notes" column.) Place commonly used syllables before less commonly used ones. (This ordering also applies to the recording process, and will be saved in the same file.) For example, in the Beijing dialect: 浙 (zhe) tʂə51又 (variant)/tʂə35又 (variant).

(3) For a character that is pronounced differently in different contexts, add example expressions after the syllables, using "~" to replace the root character. (In the template table, write the example expression in the corresponding "Notes" column.) Place syllables with commonly used meanings before those with less commonly used ones. (This order also applies to the recording, which will be saved in the same file.) For example, in the Beijing dialect: 片 (piece) phian51 一～/phian55相～儿 (photo～er). (However, many characters in the single characters list, for example, have already been given a specific context, so this does not occur often.)

2. When noting vocabulary and grammar items, only note the pronunciation that is used most naturally and commonly in the spoken language. Ignore other pronunciations.
3. When transcribing "Oral Traditions and Culture" materials, transcribe exactly as pronounced in real life (since in any given speech, there will be one pronunciation only).

(III) Sound Alteration

1. Single characters

Only record separate pronunciations. If a character has only tone sandhi, er-suffixation, or diminutives without its own separate pronunciation, enter "N/A" for separate pronunciation, and record its tone sandhi, er-suffixation or diminutives with an explanatory note. (In the template, record the phonetic symbols and their descriptions in the "Notes" column for tone sandhi, er-suffixation, or diminutives.)

2. Other materials (vocabulary, grammar, oral traditions and culture)

(1) Tone sandhi

Only note the actual tone pitch, which could be for a character with a single citation tone or a tone sandhi (no symbols added in front of tone sandhi), e.g., in the Beijing dialect: 玛瑙 (manao)ma35nau214.

All voiceless syllables are marked as "0", for example, in the Beijing dialect: 桌子 (zhuozi) tʂuo55tsɿ0 | 来了 (laile) lai35lə0.

(2) Er-suffixation and diminutives

Only note the pronunciation in actual use, not the original sound of the character, for example, in the Beijing dialect: 面儿miɐr51; in the Tangxi dialect: 女儿 nɑŋ341 (meaning "girl", in which the original pronunciation of "女" is [na113]).

(3) Other sound alternations

For changes of initials, finals, and tones caused by sound linking and other factors, use the same method as for "diminutives". i.e., only note the pronunciation in actual use, not the original sound. For example, in the Beijing dialect: 言言 Øyan35Øian0 (meaning "speaking", original pronunciation [Øian35]).

If other problems occur, refer to the above principles and methods to handle on a case-by-case basis, and add an explanation.

IX. Orthography

(I) Principles

1. Use standard Chinese characters

Always use modern standard Chinese characters.

(1) Use official modern simplified Standard Chinese characters (no other simplified versions). No conversions back to traditional characters, e.g., note "后天" not "後天" and "面粉" not "麵粉". If necessary, examples or notes can be added in brackets after the word, e.g., "干 (～燥)" (dry), and "干 (～活)" (do).
(2) Avoid using non-standard Chinese characters.

2. Use root characters

Use a root character if there is one. (For characters in Simsun [Founder Extended] only.)

3. Consistency

Use the same character for the same morpheme.

Morphemes with the same etymology may be depicted locally by different characters due to variations in pronunciations or usage; however, a single consistent written form must be used in this survey. Employ a root character if there is one. If not, then as much as possible, always use the same vernacular character, homophonic character, or epithet, e.g., in the Hakka dialect, "佢" must always be written as "我", and in the Cantonese dialect, "佢" as "渠".

(II) Guidelines

1. Root characters

(1) Should there be several ways to write a root character (orthodox character), choose the most commonly used one, e.g., the character "蕃" (fan) in expressions such as "蕃茄" (fanqie) and "蕃薯" (fanshu) is written as "番" (fan); the character "包" (bao) in expressions such as "包谷" (baogu) and "包米" (baomi) is written as "苞" (bao).
(2) Some characters in pronunciation and meaning may seem to be root characters, but it is hard to confirm. They can temporarily be treated as root characters, e.g., "坊" (fang) in "村坊村儿" (cunfang cun'r).

2. Vernacular characters

"Vernacular characters" refer to Chinese character variants that are widely written in a dialect. They include two types: one is self-created characters, and the other is characters borrowed from regular Chinese orthography. In the former are "尕", "躲", and "孪", which all mean "small" in their dialects; the latter includes "企 (stand up)" in Cantonese.

(1) Always use the root character if there is one, even if a vernacular character exists. For example, the "企 (standing)" in Cantonese should be written "倚."
(2) If there is no root character, and the vernacular one is commonly used, or there are no appropriate homophones, the vernacular character can then be used on a case-by-case basis. If necessary, add a note stating that this is a vernacular character, e.g., "尕 (small)," "潲 (wash)."

3. Synonymic characters

"Synonymic characters" have the same or similar meaning. They are not root characters. For example, "拍 (beat)" in the Chaoyang dialect is written as "打"; in the

Haikou dialect, “细 (small)” is written as “小” (both “打” and “小” are synonymic characters).

Do not use synonymic characters.

4. Phonetic characters

“Phonetic characters” are ones with “vague meanings and unclear roots”. They are mainly used as suffixes, auxiliaries, interjections, and some pronouns, as well as other elements for vague meanings, e.g., in Putonghua: “达溜～” (da (stroll)) and “乎黑～～ (hu (dark))”.

(1) Use phonetic characters on a case-by-case basis.
(2) Conditions for using phonetic characters: if possible, choose commonly used characters and ones with vague meanings. Take into account the different dialect pronunciations but also as much as possible maintain conformity of orthography across dialects. No symbols need to be added to phonetic characters, e.g., the prefix “圪” in the Jin dialect.

5. Homophonic characters

If no root, vernacular, or phonetic characters exist, use homophonic ones. These are characters that have the exact same phonetic sound as in the dialect. Sometimes no completely homophonic character can be found, so find the closest and add a note to explain.

Conditions for using homophonic characters: if possible, choose commonly used ones and maintain conformity of orthography across dialects. Homophonic characters are indicated by adding an equal sign (“=”) behind, e.g., “促=看 (look)” in the Chun’an dialect. (For Excel and Word template files, the equal sign does not need to be in superscript, but it is recommended when information is written manually.)

6. Combined sound characters

For a character whose pronunciation is a combination of two sounds, if possible, use an existing written combined sound character, e.g., “甭” [pəŋ35] in the Beijing dialect, “勿 (not)” [fiæ412] in the Suzhou dialect. If there is no existing combined written form, use the original form first placed in square brackets “[ ]” followed by the phonetic symbol, e.g., “[二十]” [dziap5]; in the Chaoyang dialect, and “[知道]” [tʂɔ213] in the Kaifeng (Henan province) dialect.

However, all the er-suffixation in combined sound characters must be written with the normal “儿” character, e.g., “面儿” [miɐr51] in the Beijing dialect.

7. Spoken characters that have no written forms

These characters are those having no appropriate root, vernacular, phonetic, or homophonic characters; in dialectology works, they are usually written as “□”.

Within a single dialect region, such morphemes are annotated "#1," "#2," "#3," etc. based on the following order of occurrence: vocabulary, grammar, oral traditions and culture. Each has one code, which is used for the same morpheme on different occasions. For example, in the Nanning dialect: use the character code "#1" for the pronunciation "la33", meaning "缝儿" (opening, crack). Each region has its own system that differs from other dialects.

8. Font and format

(1) All Chinese characters are in 5-point Song font.
(2) No blank spaces between Chinese characters.
(3) A colon ":" is used between explanations and examples.
(4) A single vertical line "|" is used between examples.
(5) Optional components of certain words must be considered as "different words used to express the same concept", e.g., "桌 (zhuo)" and "桌子 (zhuozi)" must be recorded separately, not combined as "桌 (子) (zhuo (zi))".

Part 2: Corpus Collation

Corpus collation includes audio-visual editing, data entry into templates, standardizing of file names, document archiving and proofreading. (If a special team is responsible for audio and video recording, it will conduct the audio-visual editing, standardizing of file names, and document archiving.)

When organizing and compiling data, set the computer to show file extensions. In Windows XP, click "Folder Options>View" and uncheck "Hide Extensions of Known File Types".

For locating files, refer to Table 8.

Before starting general processing of the data, the survey project team should first submit for review a small number of processed templates, audio, video, and photo files to the research project team to identify and correct problems in a timely manner.

I. Audio-Visual Editing

The purpose of editing is to delete, cut, and combine related contents in audio or video files and to eliminate redundancy, so that "each survey item is saved in a separate file" as required by the *Survey Handbook*.

(I) Audio Files

1. Editing software

Audacity and Adobe Audition are recommended.

2. Editing

Before editing, make a backup of the original files and save in another location. (If an automatic backup file is generated during editing, it can later be deleted after editing and proofreading are completed.)

Below is an example using Audacity.

(1) Deleting

Extra-long silences at the start or end of recordings, or sound interference (such as coughing) should be removed.

a. Launch Audacity, click "File>Import>Audio", and select the recording file with the parts to remove. When the import is completed, the waveform of the file will appear in the Audacity window.
b. Move the mouse to the starting point of the contents to be deleted, hold down the left button, and drag to the right towards its end point. (See Fig. 10.)
c. Press the "Delete" key on the keyboard to complete the deletion. (See Fig. 11.)
d. Click "File>Export" and select the save location of the edited file. (If it is saved in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". When the deletion is completed, close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

(2) Combining

If the recording for a survey item is divided into multiple files (e.g., a story is divided into two or more), these should be combined into one single file when the data is later collated.

a. Launch Audacity. Click "File>Import>Audio" and hold down the "Ctrl" key on the keyboard. Select the files to be combined by checking them one by one, and click "Open". Their wave forms will appear in the Audacity window.
b. Click "▼" at the top left of each audio track. Click "Name", and the file name will appear in the "Track Name" dialog box. Move the mouse to the beginning of the last audio file, hold down the left mouse button and drag it to the right until all the files to be combined are selected. (See Fig. 12.)
c. Click "Edit>Copy". Move the mouse to the end of the previous recording file and click. A thin line will appear, representing the location where the two recording files are combined. (See Fig. 13.)

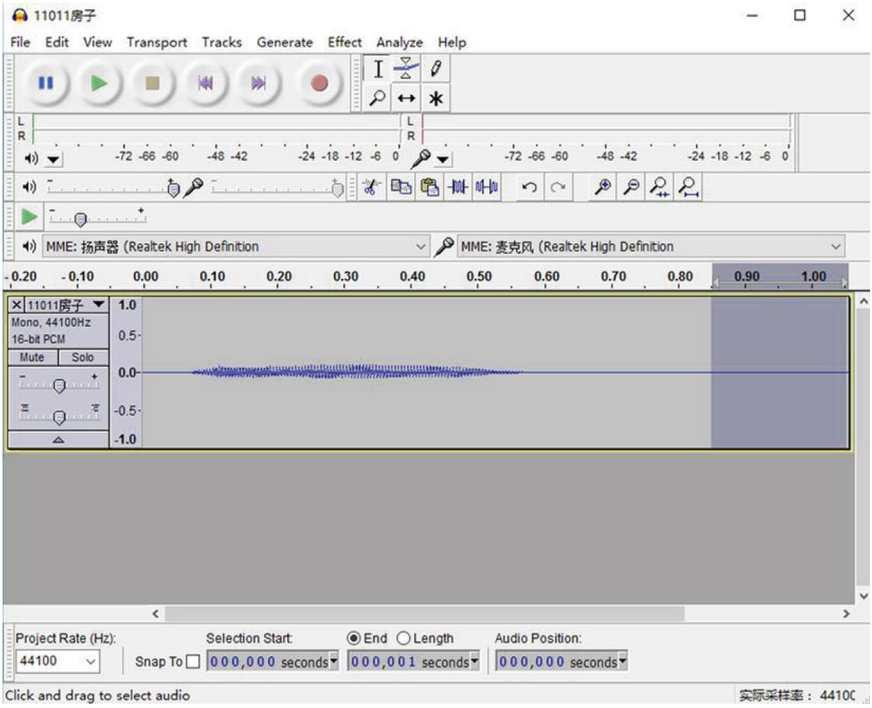


Fig. 10 Selecting the content to be deleted

d. Click "Edit>Paste". Click the "×" at the top left of the audio track of the last recording file (left of the file name), and then click "View>Adapt Window". At this point, the last audio file has been added to the end of the previous one. (See Fig. 14.)

Click "File>Export" and select the save location of the edited file. (If it is saved in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". When the deletion is completed, close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

(II) Video Files

1. Editing software

(1) The recommended video editing software is the one included on the CD-ROM provided with the camera, e.g., Sony PMB, Panasonic HD Writer AE, and Canon PIXELA Video Browser.

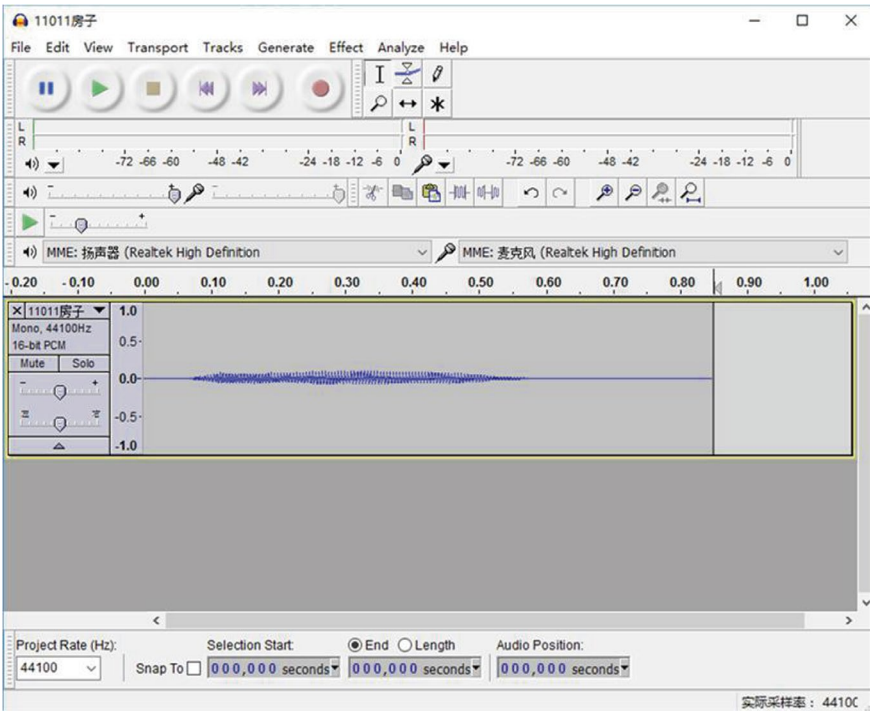


Fig. 11 Deletion completed

Using software included with the product is considered a lossless operation, which means relatively low configuration requirements for computers, but higher editing efficiency. However, do not use editing software across different camera brands. (For example, do not use Sony PMB software to edit video files captured by Canon cameras.)

(2) If no editing software is included with the camera, use non-linear video editing software such as Sony Vegas Pro.

2. Video editing

A copy of the original video files must be saved before editing.

Below are for instructions based on Sony PMB 11.0 (hereafter referred to as "PMB") and Sony Vegas Pro 19.0—Chinese version (hereafter referred to as "Vegas").

(1) Splitting videos

If a video file includes contents for more than one survey item, it should be split into multiple parts, one for each item.

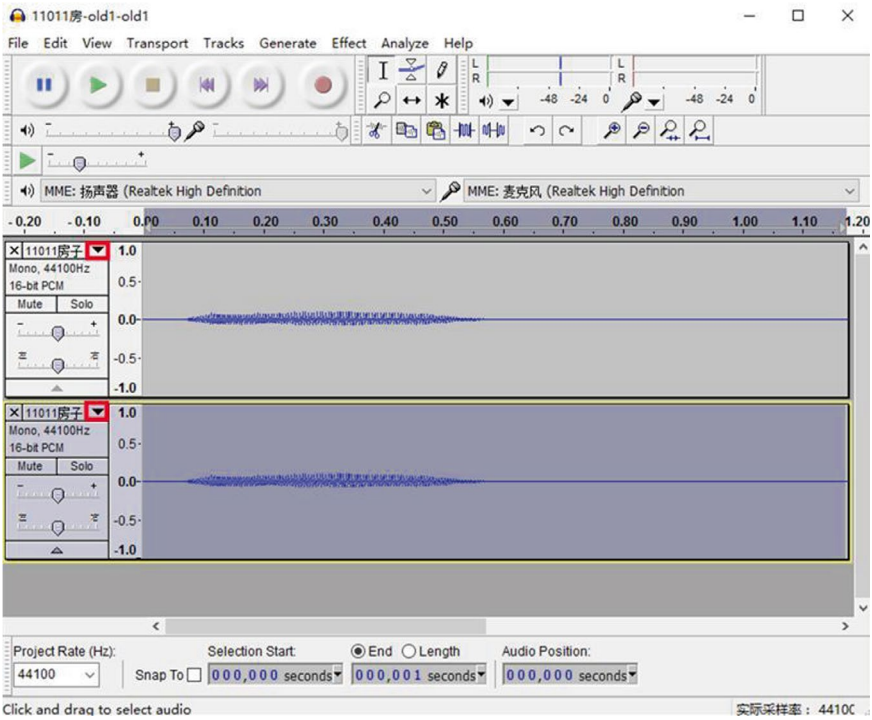


Fig. 12 The last file selected together with all other files to be combined

Method 1: Using PMB

a. Launch PMB and click "Tools > Settings". Then click "Add Folder" at the left side of the dialog box. In the right window, check the folder where the video file to be split is located, and click "OK". At this point, all the video files in the folder will appear in the PMB editor.

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left and the "Details" button at the bottom right of the editor. Detailed information about the video files will appear. (See Fig. 15.)
c. Select one of the video files to split by clicking on it in the list, and then click "Manipulate > Edit > Trim Video". The Video Trimming editor will appear.
d. Click and hold down the left mouse button, drag the small flags on both sides of the progress bar below the video playback window to set the "IN Point" (the starting point of the video file after splitting) and the "OUT Point" (the end point of the video file after splitting). The left-pointing flag is used to set the IN Point, the right-pointing flag the OUT Point. (See Fig. 16.)

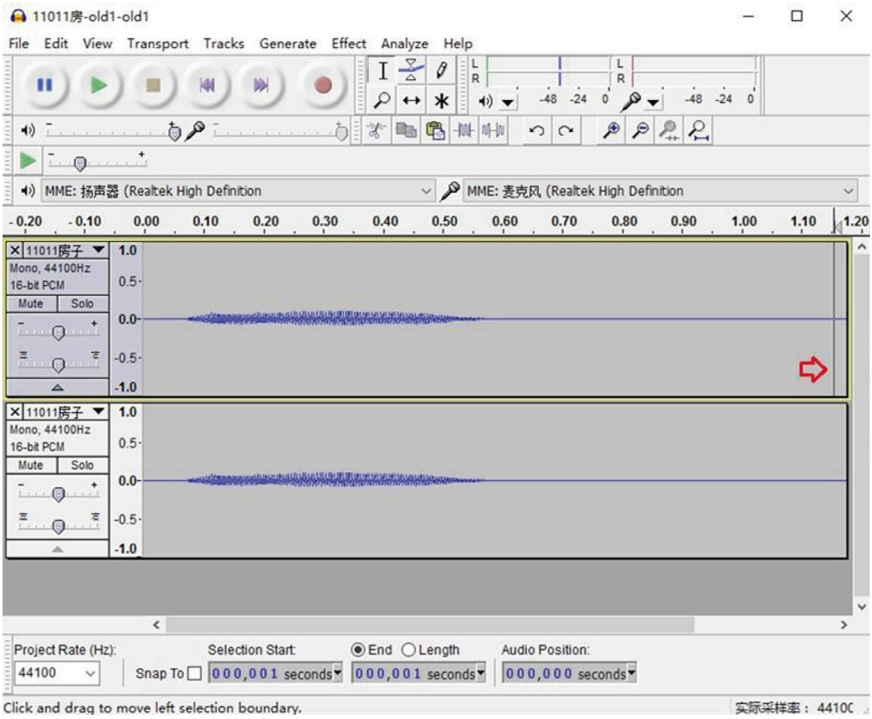


Fig. 13 Confirming the location of combined audio files

As the flags are dragged, the photos and times of the "IN Point" and "OUT Point" displayed in the two video preview windows on the right will change correspondingly.

Apart from dragging the flags, the IN and OUT points of the video file to be split can also be set by using the "Set IN Point" and "Set OUT Point" buttons at the bottom right of the video playback window.

e. After setting the IN and OUT points, click "Save Edited Video" and enter the names of the split video files in the "File name" dialog box. The "File type" should be consistent with the original file. Click "Save". Close and exit PMB.

The split video files should all be saved in the same folder as the original file.

Method 2: Using Vegas

a. Launch Vegas. Click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the file to be split. Click "Open", and the file will appear in the Project Media window in the upper left corner.
b. In the Project Media window, click and hold the left mouse button, drag the video file to the editing area (Timeline) below, release the mouse and drop it

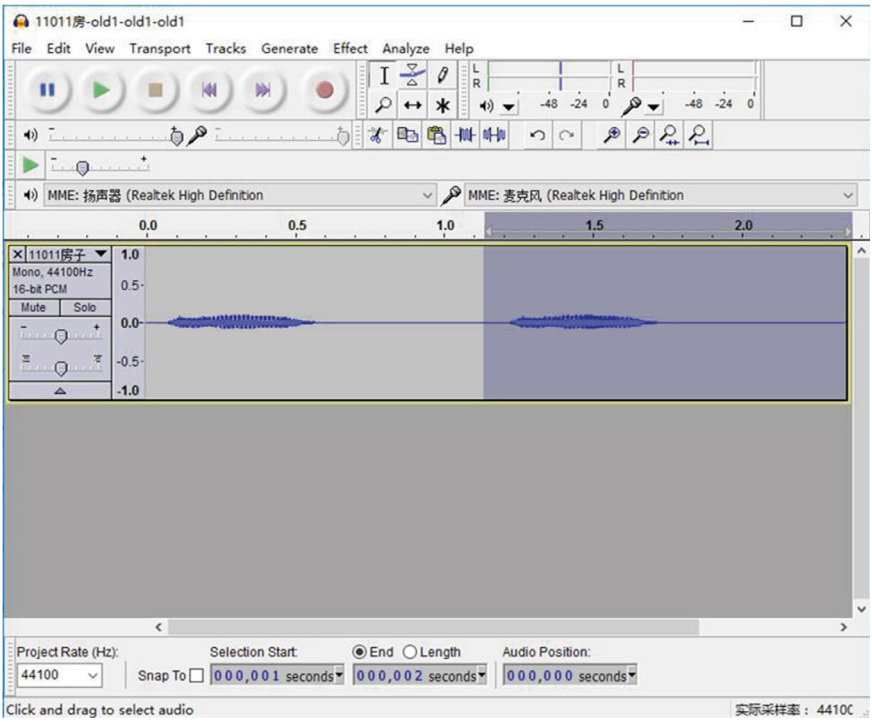


Fig. 14 Two audio files combined

there. The video and audio tracks as well as the Video Preview window will appear in the Timeline after successful uploading. (See Fig. 17.)

c. Click the "|◀" button below the Timeline. Press the "Enter" key on the keyboard, and the Video Preview window will start to play the video from the beginning. In the Video Preview window, set the IN and OUT points of the video file to be split.

d. While the video is playing, press "Enter" at the IN point, and the video will be paused in the Video Preview window. Press the "M" key on the keyboard, and a small flag will appear at the IN point; press the "Enter" key again, and the video will start playing again. At the end of the video, press "Enter" to stop playback. Press "M" again, and another small flag will appear at the end. Both IN and OUT points are now set.

When the "M" key is pressed, the input method must be in English. Click "Insert (I) > Mark (M)" to mark it.

After the IN and OUT points are set, click the IN point and press "Enter" to preview the video and confirm the settings are correct.

e. Click and hold the left mouse button above the video track at the IN point of the recording (first small flag) and drag it to the right to the end of the contents

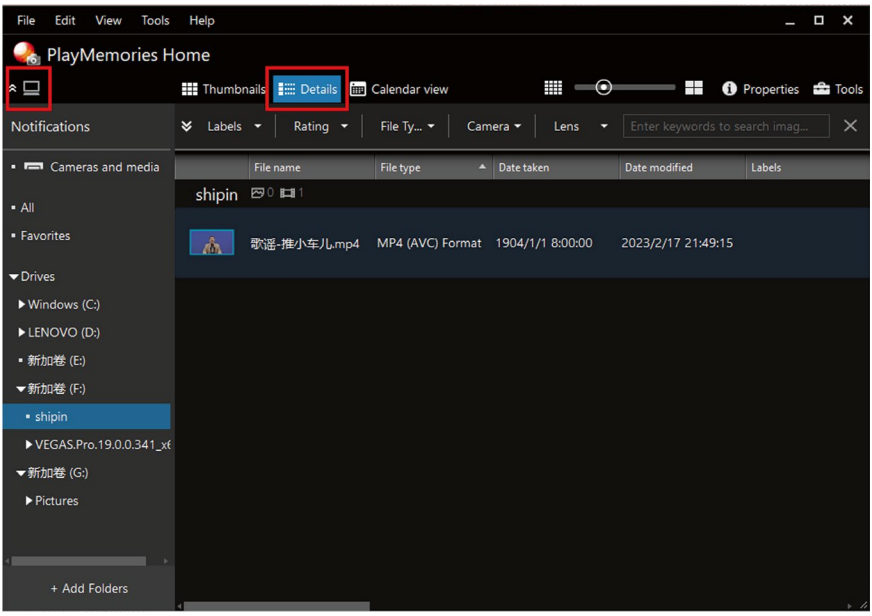


Fig. 15 Detailed information about the video files

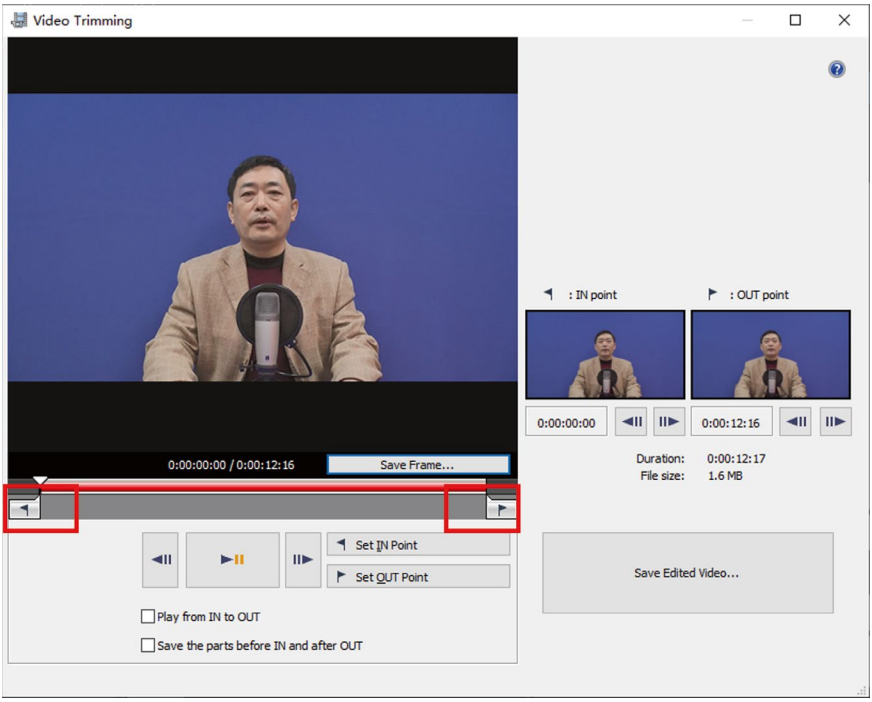


Fig. 16 Setting the IN and OUT points of video files in PMB

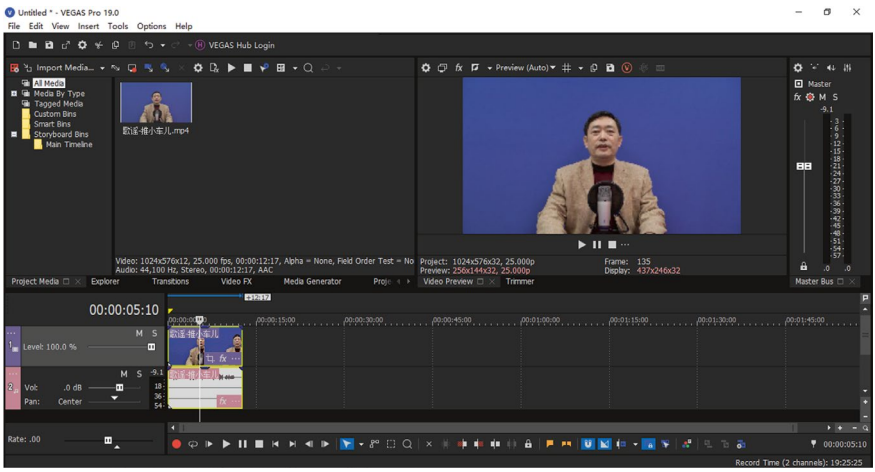


Fig. 17 Importing video files into Vegas

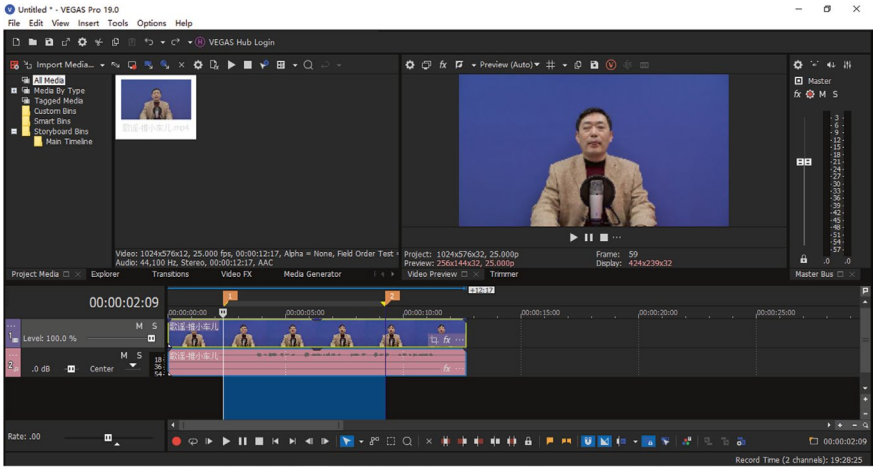


Fig. 18 Setting the IN and OUT points of the file in Vegas

(second small flag). At this point, the two tracks in the selected area are in blue, with a yellow triangle mark at the IN and OUT points. (See Fig. 18.)

f. Click "File (F)>Render As (R)". In the "Render As" dialog box, "Save in" refers to the location of the video files after splitting. Enter the names of the revised files in the box next to "File name". In the box next to "Save as type", select "Sony AVC (*.mp4; *.m2ts; *.avc)" and in the box next to "Template", select "AVCHD 1920 × 1080-50i"; check the boxes next to "Render loop region only (L)" and "Save project markers in rendered media file (K)" options so that the "✓" mark appears. (See Fig. 19.)

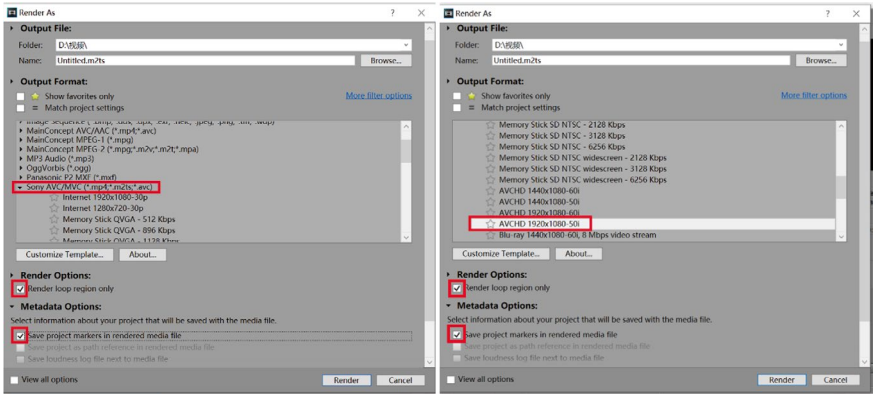


Fig. 19 Information of the file after splitting

g. Click "Save" to start rendering, and click "Close" to exit the rendering page when completed. Repeat the steps above until the splitting is completed. Close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click "No".

(2) Combining files

If contents for a survey item are captured in multiple video files, these should be combined into one single file during collation.

Multiple files to be combined should be placed in the same folder.

Method 1: Using PMB

a. Launch PMB and click "Tools>Settings". Click "Add Folder" on the left side of the dialog box. In the right window, check the folder where the files are located, and click "OK". All files in the folder will appear in the PMB editor.

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left of the editor and the "Details" button at the bottom right. Detailed information about the video files will appear.
c. Hold down the "Ctrl" key and click to select all the files to be combined, then click "Manipulate>Edit>Video Combining". Thumbnails of the selected files will appear in the "Video Combining" dialog box. When the mouse hovers over the thumbnail of a file, detailed information about it will be displayed. (See Fig. 20.)
d. Click and hold the left button to move and change the position of the thumbnails and adjust the order of the files. Adjust and verify the information, make sure there is a "✓" mark in the box under the thumbnail, and click "Combine".

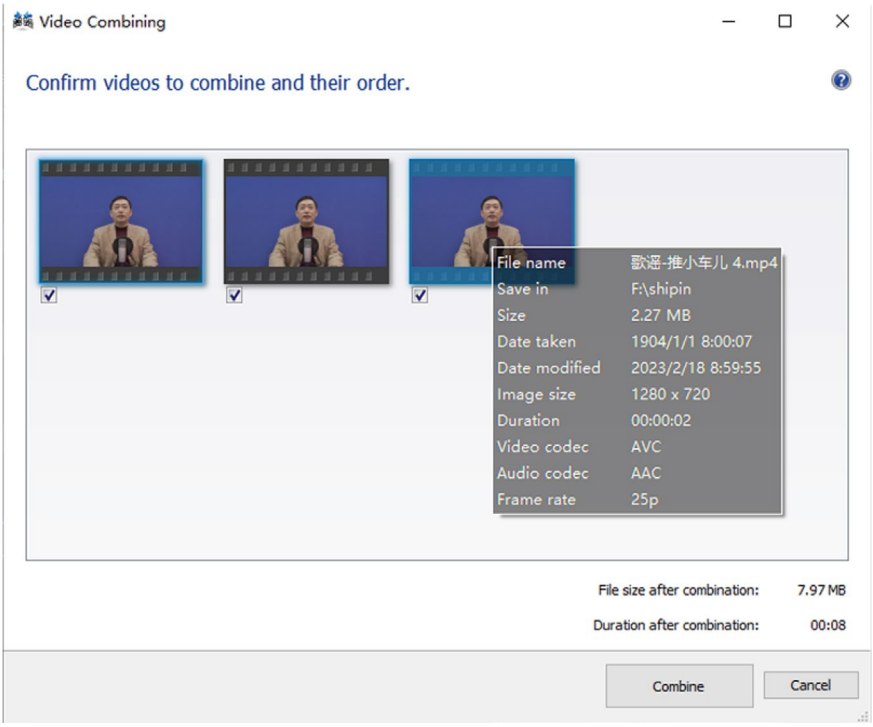


Fig. 20 Verifying information of the files and their order

e. The name of the new combined file as well as where it is saved will appear. Close and exit PMB.

The name of the new file will be similar to that of the first one in the original group. Note if there is a difference.

This new file is saved in the same folder where the first one in the original group was located.

Method 2: Using Vegas

a. Launch Vegas, and click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the files to be combined, then click "Open". The files will appear in the Project Media window in the upper left corner.
b. In the Project Media window, click and hold the left mouse button, drag the files to the editing area below, and release the mouse. They will be arranged in the order in which they are imported. (See Fig. 21.)
c. Click the "|◀" button below the tracks, and press "Enter" on the keyboard. Preview the combined files in the Preview window to verify the information.

Fig. 21 Importing multiple video files to Vegas in sequential order

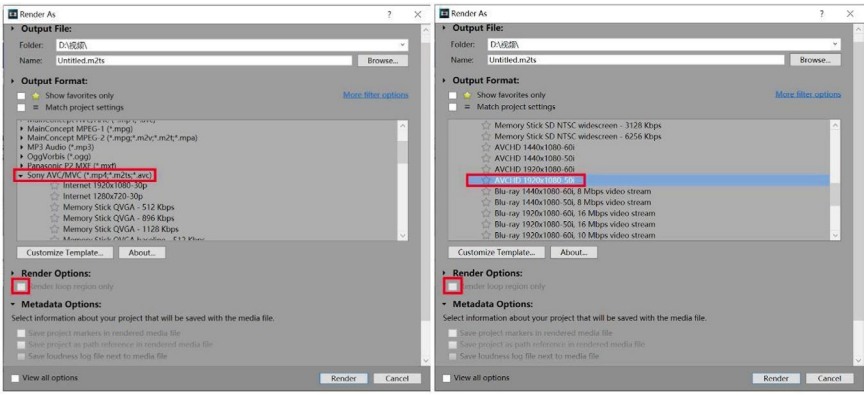


Fig. 22 Configuring the settings of the combined video file

d. Click “File (F)>Render As (R)”. In the “Render As” dialog box, “Save in” refers to the location of the video files after combining. Enter the names of the revised files in the box next to “File Name”. In the box next to “Save as type”, select “Sony AVC (*.mp4; *.m2ts; *.avc)”. In the box next to “Template”, select “AVCHD 1920×1080-50i”. Finally, uncheck the box next to the “Render loop region only (L)” option (“✓” will disappear). (See Fig. 22.)
e. Click “Save” to start rendering, and then click “Close” to exit when rendering is completed. Repeat the above steps until the combining is completed, then close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click “No”.

II. Filling Out Templates

1. Overview of the templates

After the survey is completed at each site, the following templates (see Table 7) must be filled out and transcribed by the fieldworkers. All of them have been compiled and provided by CPRLRC, except for the new template exported after transcribing the recording for "Oral Traditions and Culture". No changes can be made to either content or formatting except for the samples. (CPRLRC has already locked cells with content that cannot be changed in Excel templates.)

Special considerations when filling out the templates.

(1) Overview template

This includes 18 sub-forms: "Survey Site", "Dialect Elderly Male", "Dialect Young Male", "Dialect Elderly Female", "Dialect Young Female", "Informants for Oral Traditions and Culture (1)", "Informants for Oral Traditions and Culture (2)",

Table 7 An overview of the templates

	Excel and other structured files	Word files
Dialect elderly male	Pronunciation.xls	
		Pronunciation description.doc
	Single characters.xls	
	Vocabulary.xls	
	Grammar.xls	
	Discourse narration.xls	
Dialect young male	Pronunciation.xls	
		Pronunciation description.doc
	Single characters.xls	
	Discourse narration.xls	
Dialect elderly female	Discourse narration.xls	
Dialect young female	Discourse narration.xls	
Dialect multiple people	Discourse dialogue.xls	
Informants for oral traditions and culture	Oral traditions and culture.xls	
	0001 Ballads.baf	
	0001 Ballads.eaf	
	0001 Ballads.xls	
	…	
Others	Overview.xls	
	Table of orthography codes.xls	
		Transcription and proofreading log.doc

"Informants for Oral Traditions and Culture (3)", "Informants for Oral Traditions and Culture (4)", "Informants for Oral Traditions and Culture (5)", "Informants for Oral Traditions and Culture (6)", "Informants for Oral Traditions and Culture (7)", "LP 1", "LP 2", "LP 3", "Fieldworkers", "Survey Status", and "Dialect Groups".

The Overview template uses information from the Miyun survey site as an example. When filling out their own data, fieldworkers can either delete this information completely or edit it as needed. Some items (e.g., dialect types, distribution, population, usage, and changes) can be elaborated upon.

Numbers such as "1" and "2" in the first row should match the ordinal numbers of the survey items in the "Survey Item Overview". Note that some more complex items (such as names of survey sites) have been split into multiple columns.

For cells with no survey results (e.g., no minority groups living in the county), indicate "N/A."

(2) Pronunciation template

This includes three sub-forms: "Tones," "Initials," and "Finals." To illustrate how to fill them in, these forms provide information about Nanning Cantonese. When filling out their own data, fieldworkers can either delete this information completely or edit it as needed.

The "Sample Characters" are filled in by "Categories" according to the origins of ancient Chinese, which include tones such as voiceless *Ping*, full voiced *Shang*, and partial voiced *Shang*; initials such as *Bang* initial, *Jing* initial, and *Jian* initial; and *She* finals (e.g., *Guo She*, *Shu* tone in *Xian She* finals, *Ru* tone in *Xian She* finals). The main "Category" of ancient origin is entered as "Sample Character 1" (e.g., the *Bang* initial in [p]), followed by lesser categories. All notes to sample characters (e.g., "后 (back)" in "前～(front～)") are omitted, and explained in the "Notes" column if necessary.

(3) Pronunciation description template

Transfer the content under "Pronunciation description" in the Survey Item Overview to the pronunciation description template.

(4) Single character template

Fill in survey results in the columns "Phonetics 1" (Phonetics 1: Tone, Phonetics 1: Initial, Phonetics 1: Final), "Phonetics 2", "Phonetics 3" and "Notes" for each category. One row for each survey item. If a survey item has only one expression in the dialect (via Chinese characters), place it in "Phonetics 1"; any others go into "Phonetics 2" and "Phonetics 3".

If there are no expressions in the dialect, indicate "N/A" in column D (i.e., "Phonetics 1: Tone"). Do not leave blanks. Always include brackets.

(5) Vocabulary template

Fill in survey results in the columns "Vocabulary 1: Characters", "Vocabulary 1: Phonetics", "Vocabulary 2: Characters", "Vocabulary 2: Phonetics", "Vocabulary

3: Characters", "Vocabulary 3: Phonetics", and "Notes" for each category. One row for each survey item. Enter Chinese characters in columns "Vocabulary 1: Characters", "Vocabulary 2: Characters", and "Vocabulary 3: Characters". Enter phonetic symbols in "Vocabulary 1: Phonetics", "Vocabulary 2: Phonetics", and "Vocabulary 3: Phonetics". If a survey item has only one expression in the dialect, place it in "Vocabulary 1: Characters" and "Vocabulary 1: Phonetics" only; any others (i.e., "different words or phrases used to express the same concept") go into "Vocabulary 2: Characters", "Vocabulary 2: Phonetics", "Vocabulary 3: Characters", and "Vocabulary 3: Phonetics".

If there are no expressions in the dialect, indicate "N/A" in column D (i.e., "Vocabulary 1: Characters"). Do not leave blanks. Always include brackets.

(6) Grammar template

Fill in survey results in the columns "Sentence 1: Characters", "Sentence 1: Phonetics", "Sentence 2: Characters", "Sentence 2: Phonetics", "Sentence 3: Characters", "Sentence 3: Phonetics", and "Notes" for each category. One row for each survey item. Enter Chinese characters in "Sentence 1: Characters", "Sentence 2: Characters", and "Sentence 3: Characters". Enter phonetic symbols in "Sentence 1: Phonetics", "Sentence 2: Phonetics", and "Sentence 3: Phonetics". If a survey item has only one expression in the dialect (via Chinese characters) (i.e., "different sentences used to express the same concept"), place it in "Sentence 1: Character" and "Sentence 1: Phonetics"; any others go into "Sentence 2: Characters", "Sentence 2: Phonetics", "Sentence 3: Characters", and "Sentence 3: Phonetics".

(7) Discourse template

All speech recording materials will be transcribed to synopses in Putonghua, and entered into both the "Discourse Narration" and "Discourse Dialogue" templates. If there is no applicable survey content, indicate "N/A" in the "Putonghua Synopsis" column.

(8) Template for oral traditions and culture

Use the "Yubao Multimedia Annotation Software" to transcribe the videos into Chinese characters and phonetic symbols, and paraphrase them into Putonghua. Record the start and end times of each sentence in the video file. (Transcribed text will be segmented into sentences using "。!?;" end-of-sentence punctuation marks.) Save information about the time, place and informants of the recording for each item, for example (20110318 Tangxi, Informant: John Doe). For spoken characters that have no written forms, after the code add phonetic symbols in square brackets. If the tone in singing is different from speaking, only record initials and finals, without the tones. Leave a space between syllables.

For "Ballads", at least one complete item lasting no less than 1 min should be transcribed. For "Stories", at least one complete item lasting no less than 3 min should be transcribed. For "Self-selected Items" (if applicable), at least one complete item lasting no less than 1 min should be transcribed.

After finishing the transcription of an item, export three files with extensions .baf, .eaf, .xls, respectively. Their file names (not including the file extensions) should match those in the standard audio and video files of that same item. The "Yubao Multimedia Annotation Software" (detailed instructions provided) and sample files exported after transcription can all be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

For oral traditions and culture items that are not transcribed, enter the first sentence in the "Content Tips" column of the "oral traditions and culture .xls" template (i.e., the same as recorded in the paper version of the Survey Item Overview). For items fully transcribed, there is no need to enter the first sentence in the "Content Tips" column, nor mark with "N/A". Just leave blank. For items with no applicable survey content, indicate "N/A" in the "Content Tips" column.

(9) For any dialect region which applies codes, submit a copy of *Table of Orthography Codes* for that dialect (located in "Survey Site File Package" in the "Electronic Documents to be Submitted\Templates\Others" folder).
(10) When filling out and transcribing templates, complete the *Transcription and Proofreading Log* (located in the "Survey Site File Package" in the "Electronic Documents to be Submitted\Templates\Others" folder).

Refer to the instructions and samples in each template.

III. File Naming

1. Template file names

Transcriptions of the oral traditions and culture templates must have the same names as their audio and video files (except for extensions) when they are exported. All other templates are created in advance. Do not change their names.

2. Audio recording file names

Names of audio files should match those listed in the "Survey Item" column in the recording log, with the file extension ".wav". For example, "0001 多 (Duo).wav", "0001 Sun.wav", "0001 Sentence 1.wav", "0001 Discourse_narrative.wav", "0001 Ballads.wav", and "0001 Story of the Cowherd and the Weaver Girl.wav". Byly (Beiyu Luyin) or YBSL will automatically generate standardized file names; with Audacity, Adobe Audition or other recording software, files must be manually named in accordance with naming standards.

3. Video recording file names

Video file names must match their audio ones (except for extensions) listed in the "Survey Item" column in the recording log. For example, "0001 多 (Duo).m2ts," "0001 Sun.m2ts," "0001 Sentence 1.m2ts", "0001 Discourse_narrative.m2ts",

“0001 Ballads.m2ts”, and “0001 Story of the Cowherd and the Weaver Girl.m2ts”. YBSL will automatically generate standardized file names.

4. Photo file names

(1) Photo of the informant

The photo file name should be “0001 John Doe.jpg” or “0001 Jane Doe.jpg”. If the same informant has more than one photo file, label them as “0001 John Doe.jpg”, “0002 John Doe.jpg”, and “0003 John Doe.jpg”. Survey participants are listed in the following order: informants for minority languages, informants for oral traditions and culture, and informants for local Putonghua.

(2) Photos of the survey process

Files are named “0001 survey”, “0002 survey”, and “0003 survey”, etc.

(3) For photos other than the above two categories, file names must be in the format of “0001 Miyun.jpg”, “0002 Miyun.jpg”, and “0003 Miyun.jpg”. Information may also be added to the name to briefly describe the content, for example, “0001Miyun_new year’s eve dinner.jpg” and “0002 Miyun_fishing.jpg”.

IV. Archiving Documents

1. Fieldworkers must organize documents according to the table format (see Table 8) and place them appropriately. For existing folders and documents, no changes should be made to either placement or names.
2. After transcribing items in oral traditions and culture and generating new files, save them in the folder “Survey Site File Package\Electronic Documents to be Submitted\Templates\Informants for Oral Traditions and Culture”. Do not change the placement of any other template files.
3. Save audio files in the corresponding folders under the “Survey Site File Package\Electronic Documents to be Submitted\Audio Recordings” folder.
4. Save video files in the corresponding folders under the “Survey Site File Package\Electronic Documents to be Submitted\Video Recording” folder.
5. Save photo files in the corresponding folders under the “Survey Site File Package\Electronic Documents to be Submitted\Photos” folder.

V. Proofreading

1. All materials should be manually proofread at least twice, with the focus on the transcribed Chinese characters and phonetic symbols, audio and video

Table 8 Folder structure of "Electronic Documents to be Submitted"

Folder	Folder	Folder	Folder	File
Electronic documents to be submitted	Templates	Dialect elderly male		Pronunciation.xls
				Pronunciation description.doc
				Single characters.xls
				Vocabulary.xls
				Grammar.xls
				Discourse narration.xls
		Dialect young male		Pronunciation.xls
				Pronunciation description.doc
				Single characters.xls
				Discourse narration.xls
		Dialect elderly female		Discourse narration.xls
		Dialect young female		Discourse narration.xls
		Dialect multiple people		Discourse dialogue.xls
		Informants for oral traditions and culture		Oral traditions and culture.xls
				0001 Ballads.baf
				0001 Ballads.eaf
				0001 Ballads.xls
				…
		Others		Overview.xls
				Table of orthography codes.xls
				Transcription and proofreading log.doc
	Audio recording	Dialect elderly male	Single characters	0001多 (Duo).wav…
			Vocabulary	0001 sun.wav …
			Grammar	0001 Sentence 1.wav…
			Discourse narration	0001 Discourse_narrative.wav …
		Dialect young male	Single characters	0001多 (Duo).wav …
			Discourse narration	0001 Discourse_narrative.wav …

(continued)

Table 8 (continued)

Folder	Folder	Folder	Folder	File
		Dialect elderly female	Discourse narration	0001 Discourse_ narrative.wav …
		Dialect young female	Discourse narration	0001 Discourse_ narrative.wav …
		Dialect multiple people	Discourse dialogue	0001 Discourse_ dialogue.wav …
		Informants for oral traditions and culture	Oral traditions and culture	0001 Ballads. wav …
		LP 1	LP	0001 Story of the Cowherd and the Weaver Girl. wav …
		LP 2	LP	0001 Story of the Cowherd and the Weaver Girl. wav …
		LP	LP	0001 Story of the Cowherd and the Weaver Girl. wav …
	Video recording	Dialect elderly male	Single characters	0001 多 (Duo). m2ts …
			Vocabulary	0001 Sun.m2ts …
			Grammar	0001 Sentence 1.m2ts …
			Discourse narration	0001 Discourse_ narrative.m2ts …
		Dialect young male	Single characters	0001多 (Duo). m2ts …
			Discourse narration	0001 Discourse_ narrative.m2ts …
		Dialect elderly female	Discourse narration	0001 Discourse_ narrative.m2ts …
		Dialect young female	Discourse narration	0001 Discourse_ narrative.m2ts …
		Dialect multiple people	Discourse dialogue	0001 Discourse_ dialogue.m2ts …
		Informants for oral traditions and culture	Oral traditions and culture	0001 Ballads. m2ts …
		LP 1	LP	0001 Story of the Cowherd and the Weaver Girl. m2ts …

(continued)

Table 8 (continued)

Folder	Folder	Folder	Folder	File
		LP 2	LP	0001 Story of the Cowherd and the Weaver Girl.m2ts …
		LP 3	LP	0001 Story of the Cowherd and the Weaver Girl.m2ts …
	Photos	Informants	Dialect elderly male	0001 John Doe.jpg …
			Dialect young male	0001 Jack Smith.jpg …
			Dialect elderly female	0001 Jane Doe.jpg …
			Dialect young female	0001 Mary Smith.jpg …
			Informants for oral traditions and culture	0001 John Doe.jpg …
			LP 1	0001 Jack Smith.jpg …
			LP 2	0001 Jane Doe.jpg …
			LP 3	0001 Mary Smith.jpg …
		Survey process		0001 Survey.jpg …
		Others		0001 Miyun.jpg …

file quality, file names, and file locations. A verification tool dedicated to the Language Protection Program can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/), which can help check file names, file locations, basic parameters of multimedia files, etc.

2. The first round of proofreading should be conducted by the survey team members themselves, and the second by the survey team leader. At this stage, the proofreader must complete the *Transcription and Proofreading Log.*
3. Errors and omissions must be identified, corrected, or filled in a timely manner. If necessary, the survey should be re-done altogether.
4. The survey team leader is responsible for the quality of all the data.

After all these tasks are completed, add the name of the survey site in the "Electronic Documents to be Submitted" folder, e.g., "Electronic Documents to be Submitted at Miyun Survey Site." Submit it to the project leader together with the paper version of the *Survey Handbook* and the authorization letters of the informants.

Appendix: Commonly Used Tools and URLs for Download

1. Submission portal for "Electronic documents to be submitted" (Chinese dialects)
2. *Visual Guide*
3. "Byly" (Beiyu Luyin) software
4. Audacity Recording Software
5. "YBSL" software
6. "YBSL Multimedia Annotation software"
7. Submission verification tool for PPLRC (Chinese dialects)
   http://www.chinalanguages.cn/project/standardTools

PPLRC—Minority Languages Survey Handbook—Technical Standards

Part 1: Survey Standards

I. Survey Sites

When multiple languages and their dialects are spoken in a minority area, at least one site must be surveyed for each language. When the dialects of a language vary greatly, one site for each dialect should be surveyed.

Specific survey sites must be located in an area where the language being surveyed has a significant impact.

II. Survey Participants

1. Informants for minority languages

Each survey site must have one informant for the main minority language (abbreviated "ML").
An ML informant must meet the following requirements.

(1) Male between 55 and 65 years of age.
(2) Born and raised at the survey site in a monolingual family (both parents and spouse must be locals), and never have lived outside the survey site for long. He must speak a typical and authentic form of the local minority language.
(3) Must have received a basic primary or secondary school education (college education and above is generally not advisable).

Norms and Standards for Language Resources Protection in China,
https://doi.org/10.1007/978-981-99-9967-5_3

(4) Must have a sharp mind, be responsive, and articulate, and speak distinctly.

Exceptions can be made if there are difficulties finding informants.

2. Informants for oral traditions and culture

Data for oral traditions and culture can be collected from different informants. Their eligibility criteria are similar to those for ML informants, but can be adjusted according to circumstances.

When conditions are suitable, an ML informant can also be an informant for oral traditions and culture.

Representative inheritors will be given priority when survey items involve linguistic aspects of content in different Intangible Cultural Heritage Lists.

3. Informants for Local Putonghua

Data on Local Putonghua (abbreviated "LP") must be collected at each site from one informant who is a native speaker of the local minority language. The informant's proficiency level of LP must be equivalent to the local intermediate one. When conditions are suitable, an informant for minority languages or one for oral traditions and culture can also serve as an LP informant.

4. Overview of survey participants

Table 1 is the overview for each linguistic informant at each site.

III. Survey Contents

1. Overview

Survey contents include overview of the survey sites, descriptions for informants, fieldworkers, survey situation, and other information regarding the survey.

2. Pronunciation

This includes tones (if applicable), initials or consonants, finals or vowels, and other elements in the system, as well as sample words.

3. Vocabulary

This includes a "list of common words and expressions in Chinese dialects and minority languages" (also known as "common words," a total of 1200 words and expressions) and an "extended list of words and expressions in minority languages" (also known as "extended words," a total of 1800 words and expressions).

4. Grammar

100 grammatical items.

Table 1 Overview for survey participants and survey items

Name	Gender	Age	Overview	Pronunciation	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Informants for minority languages	Male	55–65 at time of survey	√	√	√	√	√		
Informants for oral traditions and culture	Not required	No age limit	√					√	
Informants for local Putonghua	Not required	No age limit	√						√

5. Discourse

This lists 7 topics. Informants can choose to talk about one or several of them. The section lasts a total of 20 min.

6. Oral traditions and culture

This section includes spoken forms such as "ballads," "stories," and "self-selected items". This section lasts a total of 20 min.

Collect survey items that involve linguistic aspects of content in different Intangible Cultural Heritage Lists.

7. Informants for Local Putonghua must:

(1) Speak about one topic for 3 min.
(2) Read 2 passages out loud.

See Table 1 for the survey contents for a particular informant.

IV. Fieldwork Methods

(I) Survey Contents and Methods

Table 2 summarizes survey contents and methods.

(II) Fieldwork Procedures

1. Overview

(1) A team of fieldworkers will survey each site. The team must include those who are familiar with audio and video recording, photography, and computer technology.

Alternatively, each project in different regions can form a special team for audio and video recording at each survey site. In other words, the minority language survey and audio-visual recording can be conducted by two separate teams.

(2) CPRLRC will provide each survey site with a "Survey Site File Package" containing "Software and Samples" and "Electronic Documents to be Submitted."
(3) Each survey site uses one *Survey Handbook*. (All contents that need to be surveyed at the same site will be recorded in this same *Survey Handbook*.)
(4) All sites must be surveyed in the field. Audio/video recording may be conducted at different locations as appropriate.

Table 2 Contents and methods for each part of the survey

Requirements	Overview	Pronunciation	Vocabulary	Grammar	Discourse	Oral traditions and culture	LP
Written	√	√	√	√		√ (only record the first sentence for each item)	
Audio recording		√	√	√	√	√	√
Video recording		√	√	√	√	√	√

2. Preparation

(1) Contact the local authority.
(2) Select linguistic informants, which can be conducted in a centralized manner.

Explain to the informants the "Survey Standards" and the "Survey Item Overview" to familiarize them with how to proceed and prepare.

(3) Select a location for recording and make appropriate preparations.

3. Fieldwork activities

(1) Complete the "Overview" section on the "Survey Item Overview". For items with no content, indicate "N/A". (If necessary, ask the local authority for help.)
(2) Complete the "Pronunciation" section on the "Survey Item Overview". Follow the sample words and phrases to classify the informants' recordings into different groups of tones, initials or consonants, and finals or vowels. Information about vocabulary, grammar and other linguistic aspects can also be added in this section. Tone categories are noted with ordinal numbers, e.g., "1st tone" and "2nd tone." Serial numbers are noted in Arabic numerals. The tone order must follow conventional linguistic rules for minority languages as much as possible. For voiceless and voiced tones, voiceless vowels are noted with odd numbers, voiced vowels with even ones; to differentiate between aspirated and non-aspirated vowels, aspirated ones are noted with the capital letter "H" after the ordinal number, e.g., "1st H tone"; when voiced and voiceless tones are similar, short and long vowels must be differentiated: short vowel tones with a lower number, e.g., "7th tone" (voiceless initials, short vowels), "8th tone" (voiced initials, short vowels), "9th tone" (voiceless initials, long vowels) and "10th tone" (voiced initials, long vowels).

   a. Tones, initials or consonants, finals or vowels should be ordered according to the research rules and conventions of the language group surveyed. Phonemes that are only found in loanwords are also included in the Pronunciation section and ordered in the same way.
   b. Each tone, initial or consonant, final or vowel must be accompanied by 1–3 examples, followed by phonetic symbols for each word followed by paraphrases in Putonghua to indicate the meaning (hereinafter referred to as "paraphrases"). The examples must be monosyllabic if possible. Paraphrases do not need to be put in double quotation marks.
   c. On the "Pronunciation description" page, describe in detail the values of tones, initials or consonants, and finals or vowels as well as other major phonetic alteration patterns. For other linguistic items outside the scope of the *Survey Handbook*, their tones, initials/consonants, and finals/vowels, or consonant and vowel phonemes must be recorded on this page. Items with no survey results are marked as "N/A". The "Pronunciation description" section can be filled out electronically, printed and attached to the *Survey Handbook*.

(3) Complete the "Vocabulary" section in the Survey Item Overview. Record phonetic symbols for each item separately.

   a. Especially note the "Special Conditions" column. Check that the meaning and usage in the dialect are accurate, and provide explanations and examples if necessary.
   b. For morphologically rich languages, if variants exist for a lexical item in a specific context, record the basic form (root) first, and then its variants. Use a slash "/" to separate root and variants.
   c. Take note of "language expressions without corresponding physical objects". For example, in some places, the actual "rice plant" does not exist but there is a word for it. In this case, if the term is an authentic colloquial expression, record it and indicate "language expressions without corresponding physical objects". If the expression clearly exists only in written form or is foreign, do not record it.
   d. Take note of "different words or phrases used to express the same concept." These should be arranged in descending order according to their naturalness and frequency of usage, separated by a slash "/".
   e. If a term is not spoken in a minority language, indicate "N/A".
   f. Items that involve taboos, or are contrary to the religious beliefs, customs and traditions of the minority ethnic group can be skipped, or kept out of sight.

(4) Complete the "Grammar" section in the Survey Item Overview. For morphologically rich languages, record each variant with its corresponding phonetic symbols, morphological analysis, and literal translation in Putonghua (hereinafter referred to as "literal translation"). For items without morphological variation, record the phonetic symbols and literal translation for each separately.

   a. Pay attention to the "explanation" space in the Grammar section. Check that the meaning and usage of the item are accurate, and provide explanations if necessary.
   b. In cases where there are "different grammatical forms for the same expression," these variants should be arranged in descending order according to naturalness and frequency of usage, separated by a slash "/".

(5) Complete the "Oral Traditions and Culture" section in the Survey Item Overview. Only a paraphrase of the first sentence of each item needs to be recorded.

In the Oral Traditions and Culture section, there is a subsection "Self-selected Items" used to record spoken forms that do not fall into the categories of "Ballads" or "Stories".

(6) There is no need to complete the "Discourse" and "Local Putonghua" sections in the Survey Item Overview. Yet the informant should be familiar with the contents beforehand.

   a. For the audio recording for the "Discourse" section, the more naturally and in detail the informant speaks, the better. If necessary, the fieldworker can also briefly interject. The recording can be longer than the specified time, but not shorter.
   b. During the audio recording for the "Local Putonghua" section, the informant is to "Tell a Story" or "Read Out Loud" in Putonghua. For the story, the informant is not allowed to read from any written text; for the "Read Out Loud" task, the informant may not refer to a dictionary to check pronunciation.

(7) Fill in or edit the content in the "Pronunciation", "Vocabulary," "Grammar," "Discourse" and "Oral Traditions and Culture" sections in the "Minority Language" column in the "Recording Log" (shown in a colored background) of the Survey Item Overview. No need to edit the "Local Putonghua" section. All audio recording templates are provided by CPRLRC. (These are located in the "Survey Site File Package\Electronic Documents to be Submitted\ Templates\Recording" folder.)

   a. Pronunciation recording log: There are 3 sub-sheets in the Excel file, i.e., "Tone," "Initial or Consonant" and "Final or Vowel". In the "Minority Language" column of the "Tone" sub-sheet, fill in the paraphrases of sample words for different tones on separate lines, with paraphrases of same tone ones in one cell, using "/" to separate them. In the "Minority Language" column of the "Initial or Consonant" sub-sheet, fill in the paraphrases of sample words for different initials or consonants on separate lines, with paraphrases of those with the same initial or consonant in one cell, using "/" to separate them. In the "Minority Language" column of the "Final or Vowel" sub-sheet, fill in the paraphrases of sample words for different finals or vowels on separate lines, with paraphrases of those with the same final or vowel in one cell, using "/" to separate them. For all survey items that have no content to fill in, indicate "N/A" in the "Minority Language" column. In the "Tone" sub-sheet, for all items that have no tone, indicate "N/A".
   b. Vocabulary recording log: Edit the content in the "Minority Language" column based on the survey results. If the item has a corresponding expression in the minority language, leave the original unchanged; if the item is not spoken in the minority language, delete the original content and indicate "N/A". If the item has multiple expressions, copy the original content multiple times and separate them by slashes "/", e.g., "太阳 taiyang (sun)/太阳 taiyang (sun)", so as to remind the informant of them when recording.
   c. Grammar recording log: Edit the content in the "Minority Language" column based on the survey results. If the entry has a corresponding

expression in the minority language, leave the original unchanged; if the entry has multiple expressions, copy the original content multiple times and separate them by slashes "/", e.g., "你吃米饭还是吃馒头? ni chi mifan haishi chi mantou (Do you want rice or steamed buns)/你吃米饭还是吃馒头? ni chi mifan haishi chi mantou (Do you want rice or steamed buns)", so as to remind the informant of the multiple expressions when recording.

d. Discourse recording log: Delete content about topics the informants did not mention in the "Minority Language" column and indicate "N/A".
e. Recording log for oral traditions and culture: Based on the survey results, fill in the "Minority Language" column with paraphrases of the first sentence of each item. If there is no content to fill, indicate "N/A" in the "Minority Language" column.
f. In the "Minority Language" column of the recording log, decide on a case-by-case basis whether the written forms or phonetic symbols need to be added.

(8) Use the recording software and the recording log. Audio and video recordings must be conducted simultaneously. (Recording software programs Byly, YBSL, and Audacity as well as their manuals are located in the "Survey Site Package\Electronic Documents to be Submitted\Recording" folder.)

Choose one of the following methods to record audio and video on a case-by-case basis.

a. Fieldworkers themselves record both audio and video. This requires a team which can handle all the technical details.
b. Audio and video recording is done by professionals. For this method, the fieldworker team assigns a member to participate in the recording process to ensure content accuracy.

Notes

1. Content recorded by hand must be written directly into the *Survey Handbook*. Indicate the language and dialect types on its inside cover.
2. All final recordings and videotaping must be concentrated and conducted together, after all other survey tasks are completed.
3. All audio files and videos must be reviewed in a timely manner to ensure quality.
4. To avoid duplicating work, the first sections of audio and video files should be reviewed by the research project leader.
5. At the end of the survey, request informants to sign a letter of authorization regarding all survey-related information. Survey participants who have been recorded both in audio and visual formats must also sign written authorizations where necessary.

V. Audio Recording

(I) Recording Devices

Two recording options are recommended. "Device Option 2" applies for those more proficient with computer recording devices. Other device models are also acceptable provided recording parameters and quality are met.

1. "Device Option 1": laptop + professional recording microphone

(1) Laptop: use low-noise laptops, such as Lenovo ThinkPad X, T series (more than 2 GB memory; USB 2.0 ports; Windows XP, Windows 7 or Windows 8 operating system).
(2) Microphone (cardioid, omnidirectional; microphone with sound card): Samson C03U.
(3) Pop filter: Alctron MA016.
(4) Microphone stand: Takstar NB-102.

2. Device Option 2: laptop + professional USB external sound card + professional recording microphone

(1) Laptop: same as Device Option 1.
(2) External sound card: Tascam US-144MKII.
(3) Microphone (headset, cardioid): AKG C520.
(4) Monitor headphones (for fieldworkers): AKG K99.

Note: Cardioid microphones work better for a single person speaking, while omnidirectional microphones work better for exchanges between multiple persons. Users can select the pickup patterns using the Samson C03U's pattern selection switch: middle for Cardioid, right for Omni, and left for Fig. 8. (In Cardioid pattern, make sure the "Samson" logo faces the informant.)

(II) Preparations

1. Recording location

A professional recording studio is recommended.

If none is available, find a quiet room. Close doors and windows, and turn off electric fans, air conditioners, fluorescent lights, cell phones, and other electrical appliances.

For performances in the Oral Traditions and Culture section (e.g., opera or drama) recording may be done where the performance actually takes place. The best sound quality should be ensured. If separate audio recording is not possible, the audio may be extracted from the video file and saved as a separate audio file.

2. Microphone

Install the microphone stand, set up the pop filter, and place the microphone behind it. If there is no pop filter, do not place the microphone directly in front of the informant's mouth, so as to avoid "plosives" during recording. As much as possible, keep a fixed distance and angle between the informant's mouth and the microphone.

3. Sound card

For "Device Option 2," disable the computer's built-in sound card. For example, in Windows XP, open "Control Panel," go to "Performance and Maintenance\System\Hardware\Device Manager\Sound, Video and Game Controllers," and open "Sound, Video and Game Controllers." Right-click on the built-in sound card (the name varies from computer to computer, e.g., SoundMAX Integrated Digital HD Audio) and select "Disable".

Note: After the recording session is over, enable the built-in sound card again by following the above instructions and selecting "Enable" instead of "Disable".

4. Prompts during recording

Tell the informants in advance what prompts will be used for them to "Start Recording" or "Stop Recording", for example, by holding up a sign that says "Start" or "Stop", or using hand gestures.

5. Trial recording

To help informants understand the recording process and its requirements, and to test the audio effects, fieldworkers should ask the informants to record some of the survey items first, and then start the formal recording session. In particular, remind them to avoid mouth noises such as lip smacks, loud swallowing, and heavy breathing.

(III) Recording Software

Recommended recording software is Byly (Beiyu Luyin) or YBSL (which can be set to record audio only). Audacity is used to monitor the audio and edit the files. It can also be used for recording if necessary. Other recording software, such as Adobe Audition, Cool Edit Pro, Sonar LE (included with the Samson C03U), Cubase LE 4 (included with the Tascam US-144MKII), can also be used, so long as the format and quality of the recording meet the specified requirements. Note that some hardware may not always be compatible with the recording software. If there are problems, either adjust the settings, or replace the software or hardware as soon as possible.

1. Byly (Beiyu Luyin)

Byly (Beiyu Luyin) is free recording software that is simple and user-friendly. It works for data collection of general language surveys. Byly (Beiyu Luyin) has the following features:

(1) Records survey items one at a time, and displays the waveform during recording.
(2) Automatically names and saves each recording file.
(3) Can automatically overwrite a file if an item is re-recorded.

The software can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

2. YBSL

YBSL has all the functions of Byly but also provides additional ones such as automatic recording, voice quality detection, tagging, and image association. It can also be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

3. Audacity (Note: This handbook uses the win-unicode-1.3.12 version to illustrate.)

Audacity is a free and widely used audio editor and recorder. Its user interface supports Chinese. It runs well in Windows XP, Windows 7, Windows 8, and other operating systems. Audacity can be used to test background noise, record live sound, add labels and markers, edit recording files, batch trim audio files, and remove noise.

(IV) Recording Parameters

1. Basic parameters

Sound channel: Mono.
Sample rate: 44,100 Hz.
Sample format: 16-bit.
Audio format: Windows PCM (*.wav).

In Byly (Beiyu Luyin) and YBSL, these are default settings.

Other recording software must be manually configured. In Audacity, click "Edit>Audacity Preferences".

(1) Configure recording devices and sound channels

In "Device Option 1", click "Device" and check that the "Playback Device" is the computer's built-in sound card, and the "Recording Device" is Samson C03U. (These are default settings so there is no need to reset. If the option Samson

C03U does not appear, reboot the operating system, or uninstall the drivers of other external sound cards. To avoid problems, disable all other built-in recording devices first.) Select "Mono" from among the options for "Channels". (See Fig. 1.)

For "Device Option 2", click "Devices". Check that the "Playback Device" and the "Recording Device" are both set to Tascam US-144MKII, and select "Mono" from among the options for "Channels". (See Fig. 2.)

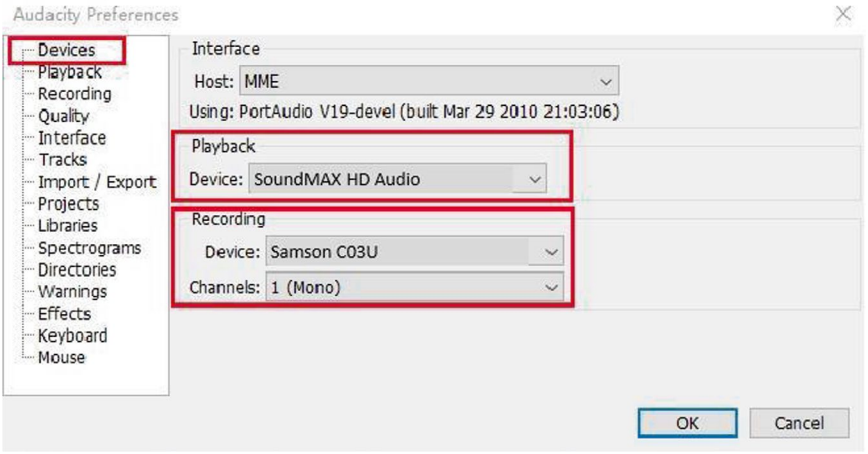


Fig. 1 Device Option 1: configuring recording devices

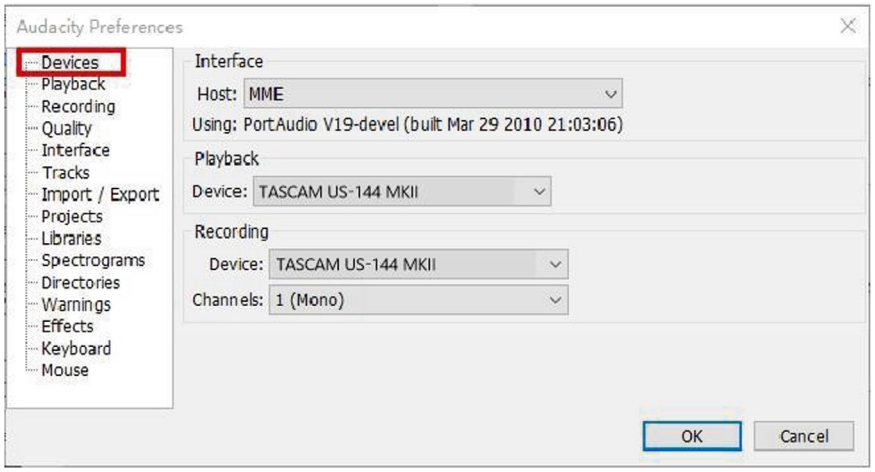


Fig. 2 Device Option 2: configuring the recording devices

(2) Setting sample rate and format

Click “Quality” and select “44100 Hz” and “16-bit” in the drop-down menu to the right of “Sampling”. (See Fig. 3.)

(3) Setting Meter/Waveform dB range

Click “Interface” and select “−96 dB (PCM range of 16 bit samples)” in the drop-down menu to the right of the “Meter/Waveform dB range”. (See Fig. 4.)

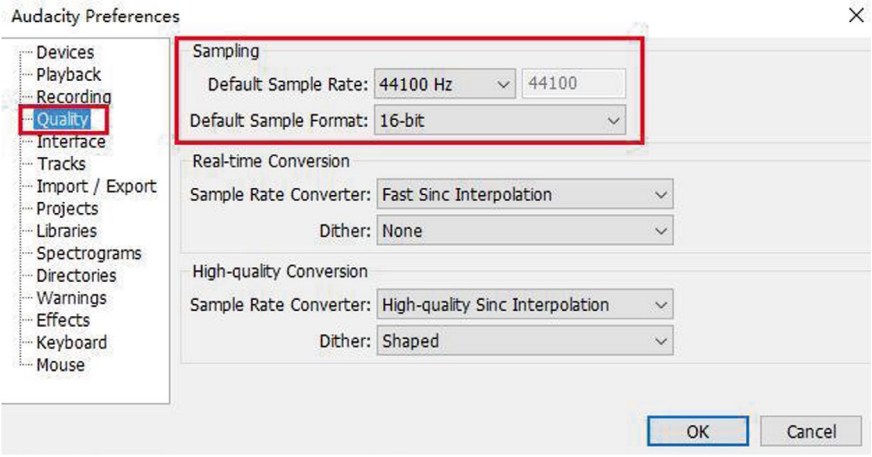


Fig. 3 Setting sample rate and format

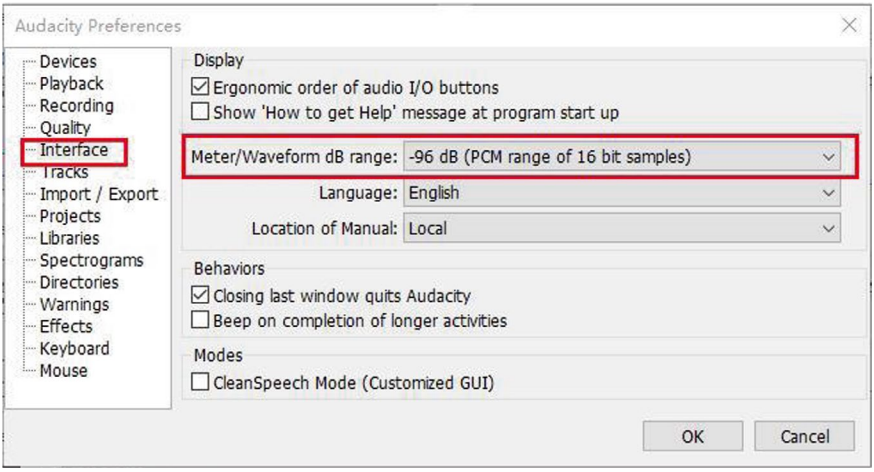


Fig. 4 Setting the Meter/Waveform dB range

(4) Setting the default view mode

Click “Track” and select “Waveform (dB)” in the drop-down menu to the right of “Default View Mode”.

After completing these settings, click “OK”.

2. Background noise and voice volumes

Background noise: must not be larger than “−48 dB”, and preferably below “−60 dB”.

Voice volume: maximum value must be “−18 dB” or more, preferably not over “−6 dB”.

Before starting the formal recording, background noise and voice volumes need to be tested to ensure recording quality. If neither meets requirements, either remove noise sources or adjust the input volume of the device. Here is an example from Audacity.

(1) Adjusting the volume slider

Launch Audacity, and move the mouse to the right end of the slider where the microphone icon is located. The cursor will take the shape of a left–right arrow. (See Fig. 5.)

Hold down the left mouse button and drag the slider to the right, so that it fills the whole window. The scale “−72”, “−60” etc. will appear. (See Fig. 6.)

This allows testing of both background noise and voice volumes. Note that most recording software uses negative intervals to indicate the volume range, ranging from “$-\infty \sim 0$”, with “0” as the upper volume limit, i.e., the maximum value.

(2) Testing background noise volume

Click the indented area on the upper right of the microphone icon. When the dark red indicator bar moves to the right toward 0, the background noise becomes louder; when closer to the left, it becomes softer. (See Fig. 6.) To ensure sound quality, best to set the background noise volume below “−60” (e.g., “−72”) and no greater than “−48”. If it is greater than “−48” (e.g., “−36”), the noise will be

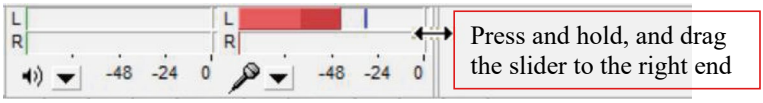
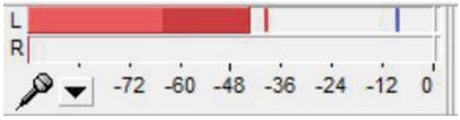


Fig. 5 Adjusting the volume slider

Fig. 6 The effect after adjustment



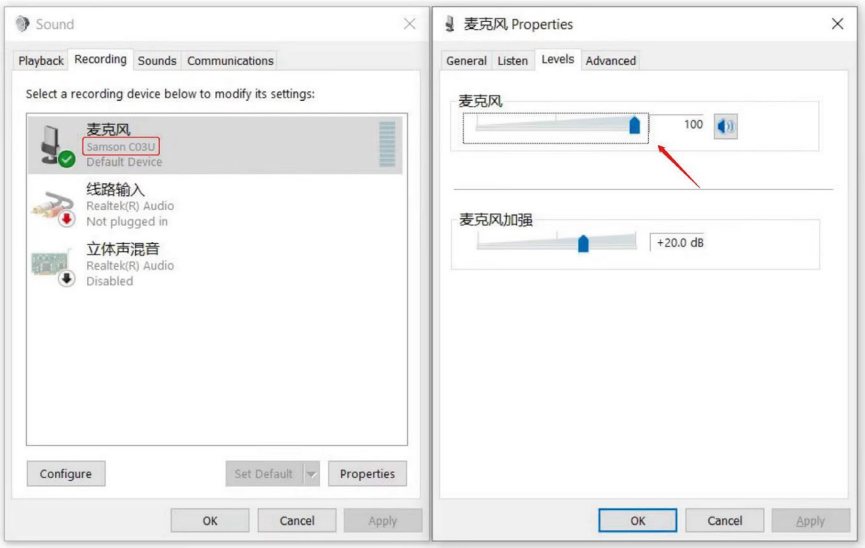


Fig. 7 Adjusting the input volume on the computer

too loud, and the noise source must be identified and removed, or the input volume lowered to an appropriate level.

(3) Testing the voice volume

Before starting the formal recording, first record a few words, phrases, or sentences spoken by the informant. When the dark red indicator bar moves to the right toward 0, the volume gets louder; when closer to the left, it becomes softer. (See Fig. 6.) For proper sound quality, the maximum volume should be set at "−18" or more (e.g., "−12", "−9"). If this is set too low (e.g., "−36"), quality will be affected because the voice signal will be too weak. (However, some sounds such as voiceless ones are naturally weak, so adjust accordingly.) If the volume is greater than "0", it will be too loud and cause clipping distortion.

(4) Adjusting the input volume

For "Device Option 1", the input volume needs to be adjusted through the computer's built-in audio system. Take Windows as an example. (See Fig. 7.) Open the "Control Panel" and go to "Sound". At this time, the "Default Device" in the "Recording" box should be "Samson C03U". Click "Default Device" in the "Recording" box and slide left and right the volume bar to adjust the volume accordingly.

For "Device Option 2", the input volume needs to be adjusted on the external sound card (Tascam US-144MKII). (See Fig. 8.) When the PHANTOM, MIC LINE and MONO switches are ON and the microphone is connected to the left

Fig. 8 Adjusting the input volume on an external sound card

or right channel, the INPUT knob can be used to adjust the input volume. If the microphone is connected to the left channel, rotate INPUT L to adjust (indicated by a box in the figure); if the microphone is connected to the right channel, rotate INPUT R to adjust. When the indicator line on the INPUT knob moves towards "MIC", the input volume rises; when it goes the other way, the volume falls.

Increasing the input volume in this way will also increase the background noise volume, so it is necessary to find a balance.

Adjusting the voice volume without changing the background noise volume is possible by adjusting the distance between the microphone and the informant's mouth, or by asking the informant to adjust the volume of his/her voice.

During recording, the fieldworker should regularly check the position of the microphone to avoid volume fluctuations due to the informant's distance or loudness of speech.

(V) Recording Methods

This section describes how to use Byly (Beiyu Luyin) and Audacity. See the *Audacity Manual* in the "Survey Site File Package\Software and Samples\Recording Software\Audacity" folder.

Fig. 9 Recording interface. "老屋"(lǎo wū) is a Chinese dialect expression for "house"

Follow the steps below to use Byly (Beiyu Luyin) (see Fig. 9):

1. Launch Byly (Beiyu Luyin software). Click "Open File", and upload the recording log.
2. Select the row indicating the item that needs to be spoken and recorded. (At this point, this row appears in blue. Under the log table, a large word is displayed, indicating the same current item to be recorded.)
3. Press the "Enter" key to start recording. (At this point, the "Recording Status" shows "Recording in progress" in red, and its waveform is displayed.)
4. After recording one item, press the "Down Arrow ↓" to go to the next and continue recording.
5. When finished, press "Enter" to stop. (The "Recording Status" shows "Recording stopped" in red.)
6. If only one item needs to be recorded or re-recorded, select that item, press "Enter" to start, and press "Enter" again to stop.

Notes

1. After the large text below the log table appears, wait one second before the informant starts speaking. Again, after the speaking ends, wait one second before moving to the next row or stopping the recording altogether.

2. Recommended software environment is Windows XP, Windows 7, or Windows 8 with Office 2003. Do not open other recording software or audio players while this software is being used.

(VI) Recording Files

1. All recording files are in Windows PCM (*.wav) format.
2. Contents for each survey item should be saved in a separate file.

In "Discourse", each narrated topic is saved in a separate file. In "Oral Traditions and Culture", each ballad, story and self-selected item is saved in a separate file. In "LP", each speech on a topic is saved in a separate file, as is each passage read out loud. In "Grammar", if a survey item includes two sentences "a" and "b", they must be saved in one file, not separate ones.

If a survey item includes more than one expression, they must be saved in one file, not separate ones.

During the recording for a single file, try not to break off in the middle. (Informants may pause but shooting should continue.) Do not split into multiple files. If this happens, the files must later be edited and combined into one.

3. Survey items with no applicable content to fill out (i.e., those marked as "N/A" in the "Minority Language" column of the recording log) need no recording.
4. Start recording and leave 1–2 s blank before starting the speech. Do the same at the end.
5. Sample recordings can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VI. Video Recording

1. Recording devices

(1) Camera: Sony, Canon, Panasonic, and other top-tier brands of full HD digital cameras are recommended. However, any camera model may be used as long as the technical specifications and video quality meet the requirements.
(2) Microphone: Use a wired or wireless microphone compatible with the camera. (For best sound quality use an external microphone.)
(3) Tripod: compatible with the camera.

2. Recording requirements

(1) Use a tripod to fix the camera, adjust its height, and point the lens at the upper half of the informant's body.

(2) Place the microphone in front of the informant in an appropriate position, or clip it to his/her collar.
(3) Shoot long shots if possible. If zooming is unavoidable, use an optical zoom lens rather than a digital one.
(4) The backdrop should be uncluttered and even. Use pure blue but not too dark.
(5) Choose a place with good light. Avoid harsh shadows on the background cloth (backdrop plate). The informant should face the camera. Avoid back lighting which will put his/her face in shadow.
(6) Performances for items in "Oral Traditions and Culture" (e.g., opera or drama) can be recorded on site without setting up a backdrop plate.

3. Recording methods

Below are several methods for video shooting. Those who are proficient with post video editing can choose to use a camera to record multiple items in one continuous shoot. In fact there are no strict rules about how to shoot the videos so long as their parameters and quality meet the specifications for the audio quality.

(1) Using YBSL

YBSL can be used to record language survey items. Version 1.0 has the following features:

a. Can record video and audio simultaneously. Can automatically split audio and video files, name and store them separately. Supports 1920 × 1080/25 fps HD video format (which requires HD cameras, such as Logitech C930e HD camera).
b. Supports importing file formats of Excel 2003 and above (*.xls and *.xlsx). International phonetic symbols, labeling information and other content can be directly edited and saved to the source Excel file.
c. Can record continuously multiple survey items, either manually or automatically.
d. Can monitor audio recording effects against the customized parameters. Substandard audio files can be automatically flagged in the source Excel file.
e. Can record audio alone or record both video and audio together.
f. The *Visual Guide* provided with this handbook can be uploaded to YBSL to collect both audio and video data.

To use YBSL for high-definition recording, your computer hardware and software must meet the following requirements:

a. Software: A 64-bit Windows 7, Windows 8, or Windows 10 operating system with pre-installed Microsoft's .net Frameworks 4.0 (or above); Office 2003 or above.
b. Hardware: YBSL has high requirements for hardware in order to collect and encode HD videos. Hardware should be a Core i7 or above non-low voltage CPU (specific models are 4600M/3610QM/4700MQ/4702HQ/5700HQ/6700HQ or above), DDR3 4G memory or above, hard drive speed of 7200 rpm or above

(solid state drive is highly recommended), and no less than 3 USB ports. Lenovo (including ThinkPad and other Lenovo models), Dell and other top-tier brands are recommended.

Details on how to use YBSL are included in the Help file (Help.chm) that comes with the software. YBSL can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

(2) Shooting items one by one

Record each survey item and save it in a separate file. See below for step-by-step instructions:

a. The fieldworker first reviews the pronunciation of each survey item with the informant. After the correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts the recording and gestures to the informant to speak directly to the camera.
b. When the speaking is finished, the recorder operator stops recording and gestures to the camera operator who stops shooting. The fieldworker then reviews the pronunciation of the next survey item with the informant, and the process is repeated.

Recording items one by one will generate multiple video files. To facilitate later data arrangement, it is recommended that before recording the first item in a series of items (e.g., a set of 10 or 20 items), a separate video file be made to record that first item number (e.g., the camera operator could read out the number or write it on a piece of paper and save it as a separate file). This acts as a marker for the series' location. (These marker videos can later be deleted in post editing.)

(3) Shooting multiple items together

Multiple survey items can be recorded in one take and stored in one file. There are two ways to accomplish this:

First, the informant and the recorder operator view the same laptop screen together. See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the laptop screen and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read

out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can be deleted later in post-production editing.) Make sure that the informant's face, the prompts on the computer screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

Second, the informant views a separate computer monitor or projection screen (i.e., a separate computer monitor or screen that is plugged into the laptop). See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the separate monitor or screen, and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can later be deleted in post-production editing.) Make sure that the informant's face, the prompts on the separate computer or projection screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

4. Video files

(1) The highest quality setting of the shooting devices should be used, and shooting must be done in full HD mode. Parameters must be no less than $1920 \times 1080/50$i (or 25p)/15,000 kbps. The specific file format depends on what is available with the camera device, such as *.m2ts, and *.mpg.
(2) Each survey item should be saved in a separate file.

In "Discourse", each narrated topic is saved in a separate file. In "Oral Traditions and Culture", each ballad, story and self-selected item is saved in a separate file. In "LP", each speech on a topic is saved in a separate file, as is each passage read out loud. In "Grammar", if a survey item includes two sentences "a" and "b", they must be saved in one file, not separate ones.

If a survey item includes more than one expression, they must be saved in one file, not separate ones.

During the shooting for a single file, try not to break off in the middle. (Informants may pause but shooting should continue.) Do not split into multiple files. If this happens, the files must later be edited and combined into one.

If multiple items are shot together without stopping, the recording will need to be divided into separate files during subsequent data collation.

(3) Survey items with no applicable content to fill out (i.e., those marked as "N/A" in the survey) need no shooting.
(4) In the video file, wait 1–2 s before each speech starts and after it ends. Avoid video and audio out of sync, visible flickering, and noticeable noise and echo.
(5) Sample videos can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VII. Photography

1. What to photograph

(1) Portrait photos of informants
(2) Survey sites
(3) Objects and events with local characteristics.

2. Photography devices

Digital cameras, preferably Canon, Nikon, or other top-tier brands of digital SLR cameras of at least 12 megapixels.

3. Photo file format

(1) Set to the highest quality format (i.e., the highest resolution and definition). The files must be in *.jpg format, ideally with a resolution no less than 4368×2912 pixels.
(2) Sample photos can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

VIII. Notation

(I) Font and Format

1. All phonetic symbols in the templates are entered in IpaPanNew font. Tone pitch values following the phonetic symbols are also entered in IpaPanNew font. No need to change fonts. If phonetic symbols cannot be displayed in this font, use the Unicode encoding system.

   All other characters are in Song font.
2. All zero initials are indicated by its symbol "Ø".

3. Do not use superscript for the numbers that indicate tone pitch. Use the aspiration symbol "h" (not in superscript), not "p^{h}" and "pʰ". Labialized consonants and palatalized consonants are annotated as "pj" and "pw", not as "p^{j}" and "p^{w}". Coronal-nasal consonants are annotated as "mb" and "ld", not as "^{m}b" and "^{l}d". Pre-glottalized stop consonants are annotated with "ʔm", not as "^{ʔ}m". Retroflex finals are annotated as "aɻ", not "$a^{ɻ}$".
4. For phonetic units such as "m n ŋ l", which can alone form syllables, do not add short vertical lines above or below.
5. Enter "ts" as two separate symbols, that is, "t" and "s". The same applies to affricate consonants such as "tʂ tɕ". In the case of "d̥", enter two separate symbols, "d" and the voiceless symbol "◌̥". The same applies to other voiceless consonants. In the case of "ã", enter two separate symbols "a" and the nasal vowel "◌̃". The same applies to other nasal vowels. In the case of "a̱", enter two separate symbols "a" and the symbol for tense vowels "◌̱". The same applies to other tense vowels. Use "g" not "ɡ". Use the vowel "ɤ" not "ʏ". Use the phonetic symbol "ː" instead of the colon ":" for long vowels
6. Do not add additional symbols to the phonetic symbols, such as "ọ". The actual phonetic values can be explained in detail in the "Phonology Description" section of the Survey Item Overview. Note that the voiceless, nasalized and long vowel symbols are not additional symbols.
7. Use "◌́" to indicate accents, for for example, "◌́sɔntsə".
8. All tone pitches are indicated in numbers. If there is a pause, use "0" to indicate it. For example: "koʔn304".
9. There must be a blank space between words, whether tonal or not. All syllables in a multi-syllabic word are hyphenated. (If necessary, the syllable-dividing mark "ˈ" can be added.)

(II) Sound Alteration

1. For changes in initials, finals and tones caused by sound linking and other factors, only record the pronunciation actually used, rather than the original sound of the item. (No extra symbols are added before the phonetic symbols for the actual pronunciation.) Clarify with a note if necessary.
2. For tonal languages, all tone pitches for voiceless syllables are marked as "0".

Part 2: Corpus Collation

Corpus collation includes audio-visual editing, data entry into templates, standardizing of file names, document archiving and proofreading. (If a special team is responsible for audio and video recording, it will conduct the audio-visual editing, standardizing of file names, and document archiving.)

When organizing and compiling data, set the computer to show file extensions. In Windows XP, click "Folder Options>View" and uncheck "Hide Extensions of Known File Types".

For locating files, refer to Table 4.

Before starting general processing of the data, the survey project team should first submit for review a small number of processed templates, audio, video, and photo files to the research project team to identify and correct problems in a timely manner.

I. Audio-Visual Editing

The purpose of editing is to delete, cut, and combine related contents in audio or video files and to eliminate redundancy, so that "each survey item is saved in a separate file" as required by the *Survey Handbook*.

(I) Audio Files

1. Editing software

Audacity and Adobe Audition are recommended.

2. Editing

Before editing, back up the original recording files in another location. (If an automatic backup file is generated during the editing process, it can be deleted after editing and proofreading are completed.)

Below is an example using Audacity.

(1) Deleting

Extra-long silences at the start or end of recordings, or sound interference (such as coughing) should be removed.

a. Launch Audacity, click "File>Import>Audio", and select the recording file with the parts to remove. When the import is completed, the waveform of the file will appear in the Audacity window.
b. Move the mouse to the starting point of the contents to be deleted, hold down the left button, and drag to the right towards its end point. (See Fig. 10.)
c. Press the "Delete" key on the keyboard to complete the deletion. (See Fig. 11.)
d. Click "File>Export" and select the save location of the edited file. (If it is saved in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". When the deletion is completed, close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

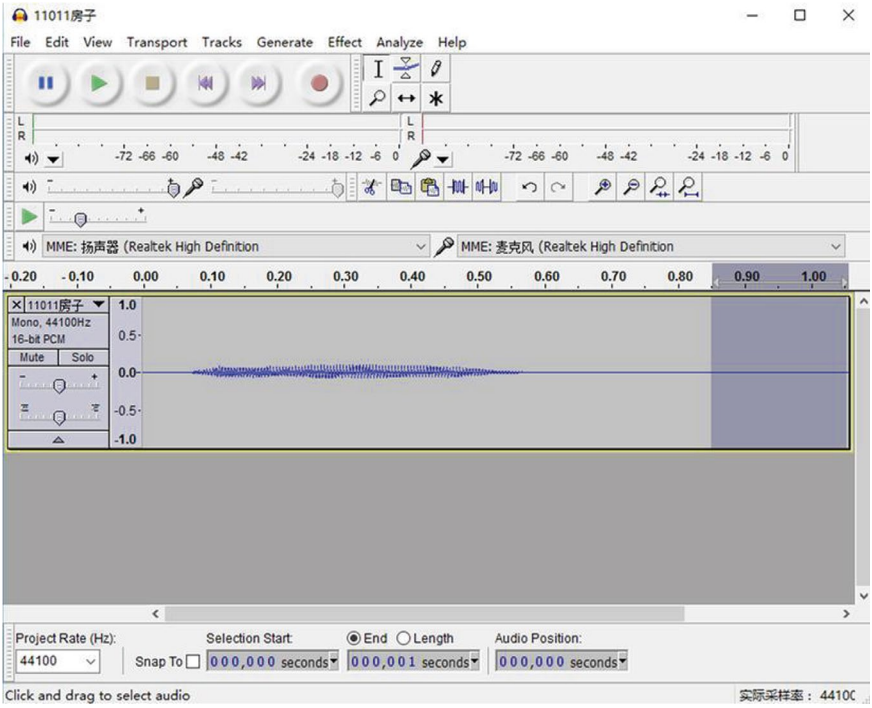


Fig. 10 Selecting the content to be deleted

(2) Combining

If the recording for a survey item is divided into multiple files (e.g., a story is divided into two or more), these should be combined into one single file when the data is later collated.

a. Launch Audacity. Click "File>Import>Audio" and hold down the "Ctrl" key on the keyboard. Select the files to be combined by checking them one by one, and click "Open". Their wave forms will appear in the Audacity window.
b. Click "▼" at the top left of each audio track. Click "Name", and the file name will appear in the "Track Name" dialog box. Move the mouse to the beginning of the last audio file, hold down the left mouse button and drag it to the right until all the files to be combined are selected. (See Fig. 12.)
c. Click "Edit>Copy". Move the mouse to the end of the previous recording file and click. A thin line will appear here, representing the location where the two recording files are combined. (See Fig. 13.)
d. Click "Edit>Paste". Click the "×" at the top left of the audio track of the last recording file (left of the file name), and then click "View>Adapt Window". At this point, the last audio file has been added to the end of the previous one. (See Fig. 14.)

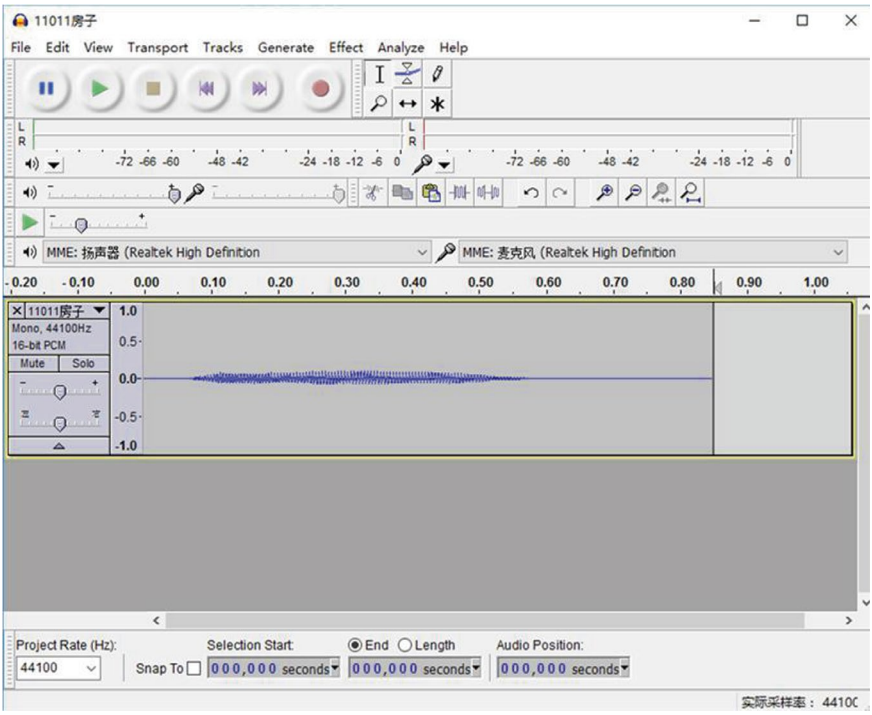


Fig. 11 Deletion completed

e. Click "File>Export" and select the save location of the edited file. (If it is saved in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". Close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

(II) Video Files

1. Editing software

(1) The recommended video editing software is the one included on the CD-ROM provided with the camera, e.g., Sony PMB, Panasonic HD Writer AE, and Canon PIXELA Video Browser.

Using software included with the product is considered a lossless operation, which means relatively low configuration requirements for computers, but higher editing efficiency. However, do not use editing software across different camera brands. (For example, do not use Sony PMB software to edit video files captured by Canon cameras.)

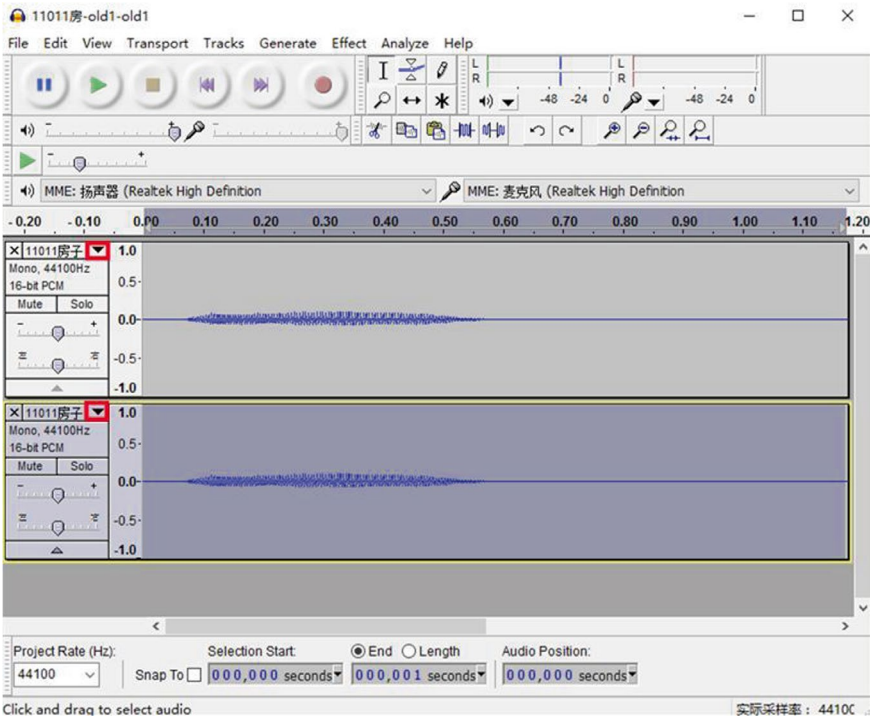


Fig. 12 The last file selected together with all other files to be combined

(2) If no editing software is included with the camera, use non-linear video editing software such as Sony Vegas Pro.

2. Video editing

A copy of the original video files must be saved before editing.

Below are instructions based on Sony PMB 11.0 (hereafter referred to as "PMB") and Sony Vegas Pro 19.0—Chinese version (hereafter referred to as "Vegas").

(1) Splitting videos

If a video file includes contents for more than one survey item, it should be split into multiple parts, one for each item.

Method 1: Using PMB

a. Launch PMB and click "Tools > Settings". Then click "Add Folder" at the left side of the dialog box. In the right window, check the folder where the video file to be split is located, and click "OK". At this point, all the video files in the folder will appear in the PMB editor.

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left and the "Details" button at the bottom right of the editor. Detailed information about the video files will appear (See Fig. 15).

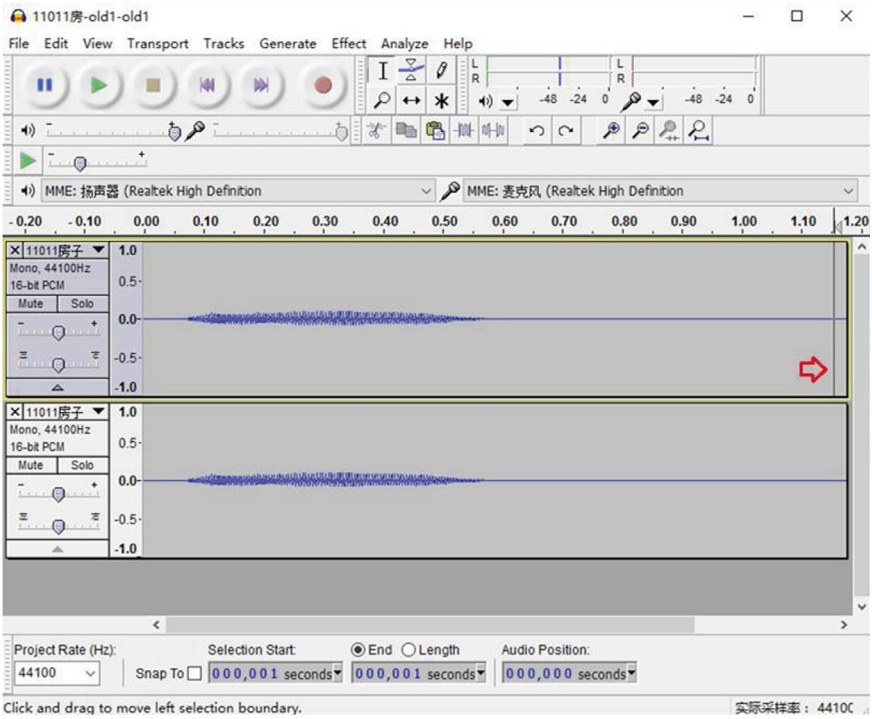


Fig. 13 Confirming the location of combined audio files

c. Select one of the video files to split by clicking on it in the list, and then click "Manipulate > Edit > Trim Video". The Video Trimming editor will appear.
d. Click and hold down the left mouse button, drag the small flags on both sides of the progress bar below the video playback window to set the "IN Point" (the starting point of the video file after splitting) and the "OUT Point" (the end point of the video file after splitting). The left-pointing flag is used to set the IN Point, the right-pointing flag the OUT Point. (See Fig. 16.)

As the flags are dragged, the photos and times of the "IN Point" and "OUT Point" displayed in the two video preview windows on the right will change correspondingly.

Apart from dragging the flags, the IN and OUT points of the video file to be split can also be set by using the "Set IN Point" and "Set OUT Point" buttons at the bottom right of the video playback window.

e. After setting the IN and OUT points, click "Save Edited Video" and enter the names of the split video files in the "File name" dialog box. The "File type" should be consistent with the original file. Click "Save". Close and exit PMB.

The split video files should all be saved in the same folder as the original file.

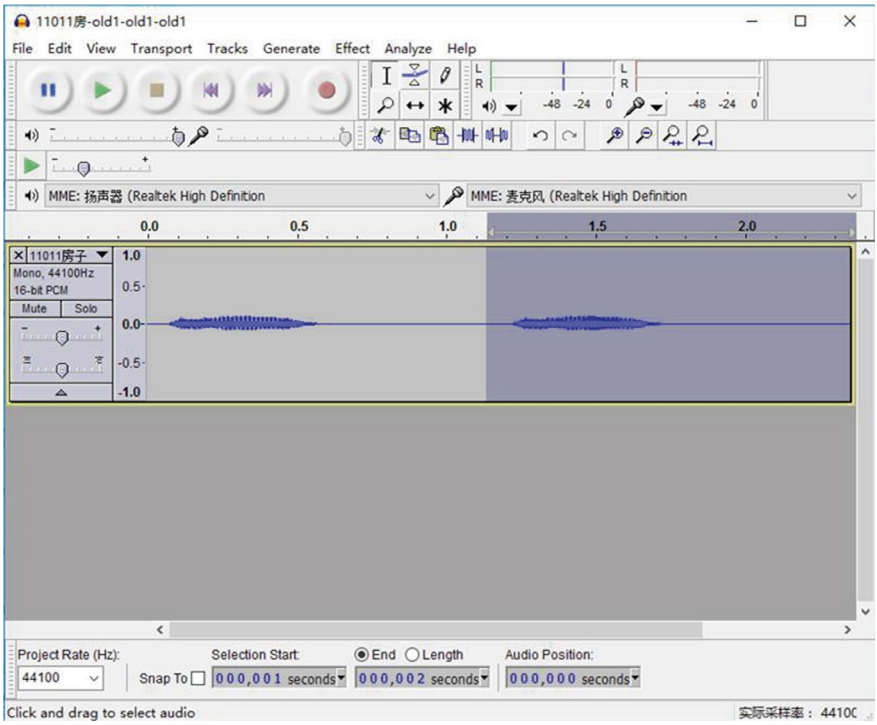


Fig. 14 Two audio files combined

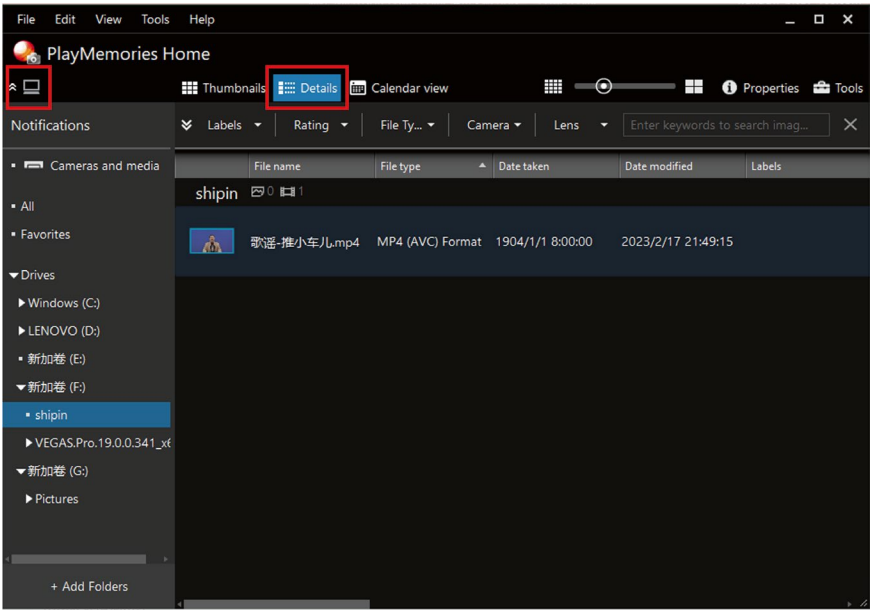


Fig. 15 Detailed information about the video files

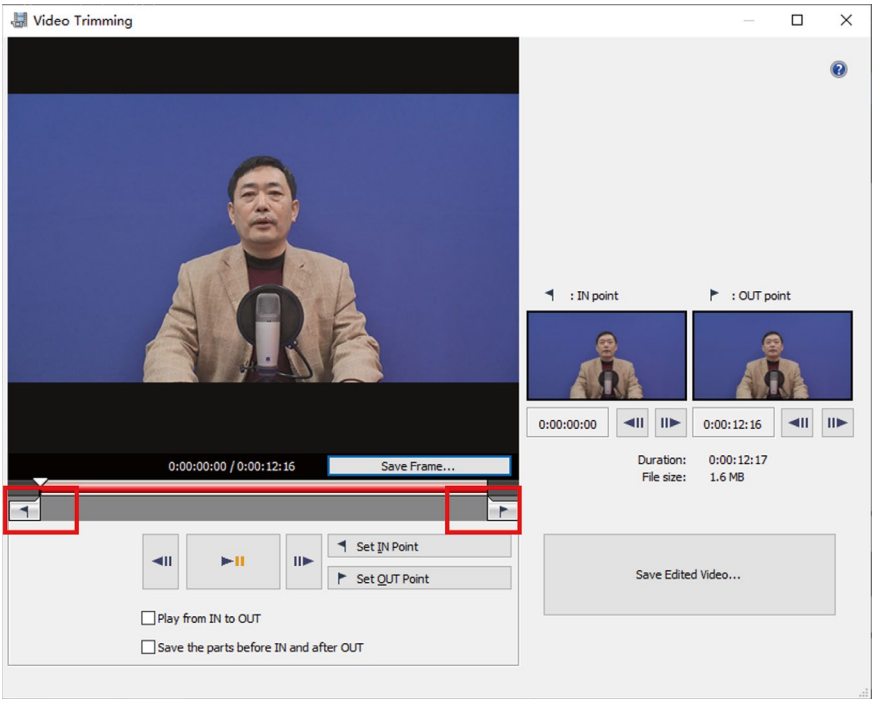


Fig. 16 Setting the IN and OUT points of video files in PMB

Method 2: Using Vegas

a. Launch Vegas. Click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the file to be split. Click "Open", and the file will appear in the Project Media window in the upper left corner.
b. In the Project Media window, click and hold the left mouse button, drag the video file to the editing area (Timeline) below, release the mouse and drop it there. The video and audio tracks as well as the Video Preview window will appear in the Timeline after successful uploading. (See Fig. 17.)
c. Click the "|◀" button below the Timeline. Press the "Enter" key on the keyboard, and the Video Preview window will start to play the video from the beginning. In the Video Preview window, set the IN and OUT points of the video file to be split.
d. While the video is playing, press "Enter" at the IN point, and the video will be paused in the Video Preview window. Press the "M" key on the keyboard, and a small flag will appear at the IN point; press the "Enter" key again, and the video will start playing again. At the end of the video, press "Enter" to stop playback. Press "M" again, and another small flag will appear at the end. Both IN and OUT points are now set.

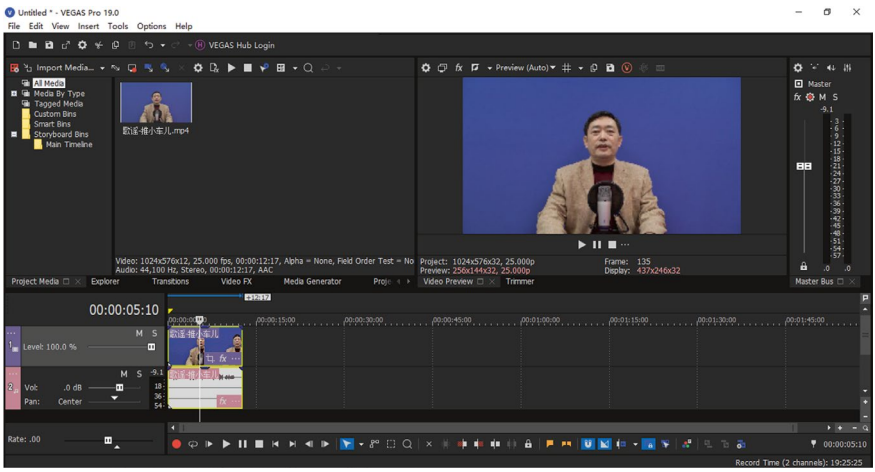


Fig. 17 Importing video files into Vegas

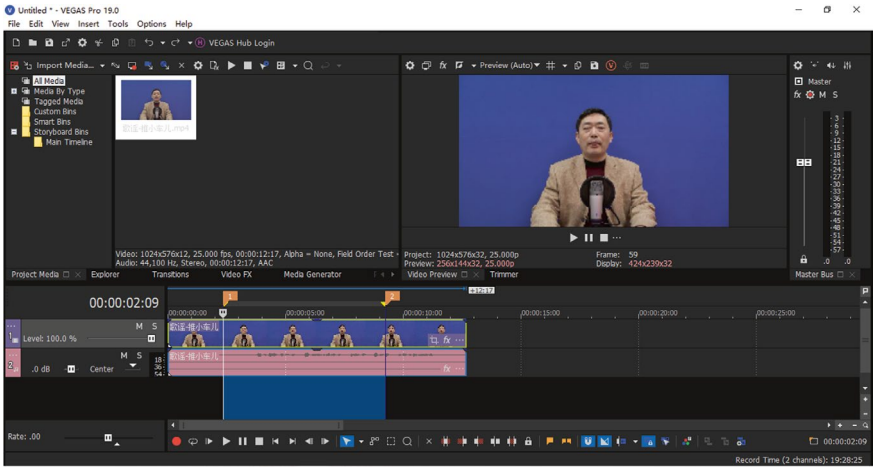


Fig. 18 Setting the IN and OUT points of the file in Vegas

When the "M" key is pressed, the input method must be in English. Click "Insert (I) > Mark (M)" to mark it.

After the IN and OUT points are set, click the IN point and press "Enter" to preview the video and confirm the settings are correct.

e. Click and hold the left mouse button above the video track at the IN point of the recording (first small flag) and drag it to the right to the end of the contents (second small flag). At this point, the two tracks in the selected area are in blue, with a yellow triangle mark at the IN and OUT points. (See Fig. 18.)

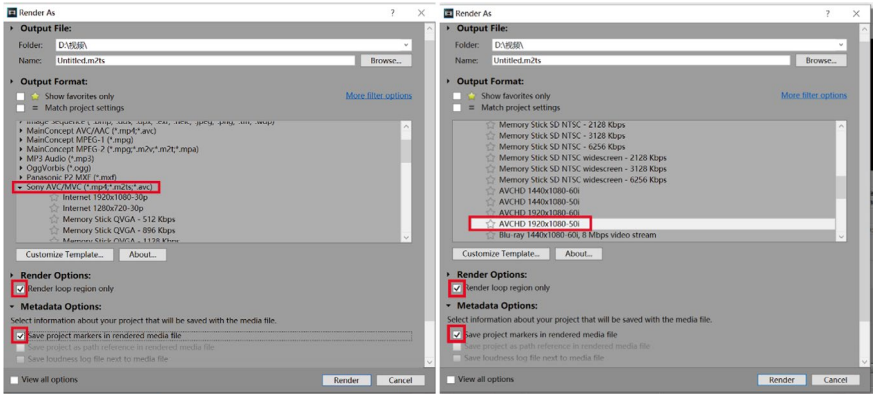


Fig. 19 Information of the file after splitting

f. Click "File (F)>Render As (R)". In the "Render As" dialog box, "Save in" refers to the location of the video files after splitting. Enter the names of the revised files in the box next to "File name". In the box next to "Save as type", select "Sony AVC (*.mp4; *.m2ts; *.avc)" and in the box next to "Template", select "AVCHD 1920×1080-50i"; check the boxes next to "Render loop region only (L)" and "Save project markers in rendered media file (K)" options so that the "✓" mark appears. (See Fig. 19.)
g. Click "Save" to start rendering, and click "Close" to exit the rendering page when completed. Repeat the steps above until the splitting is completed. Close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click "No".

(2) Combining files

If contents for a survey item are captured in multiple video files, these should be combined into one single file during collation.

Multiple files to be combined should be placed in the same folder.

Method 1: Using PMB

a. Launch PMB and click "Tools>Settings". Then click "Add Folder" on the left side of the dialog box, type a check mark in the right window on the folder containing the video files to be combined, then click OK. All video files in the folder will appear in the PMB editor.

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left of the editor and the "Details" button at the bottom right. Detailed information about the video files will appear.
c. Hold down the "Ctrl" key and click to select all the files to be combined, then click "Manipulate>Edit>Video Combining". Thumbnails of the selected files

will appear in the "Video Combining" dialog box. When the mouse hovers over the thumbnail of a file, detailed information about it will be displayed. (See Fig. 20.)

d. Click and hold the left button to move and change the position of the thumbnails and adjust the order of the files. Adjust and verify the information, make sure there is a "✓" mark in the box under the thumbnail, and click "Combine".
e. The name of the new combined file as well as where it is saved will appear. Close and exit PMB.

The name of the new file will be similar to that of the first one in the original group. Note if there is a difference.

This new file is saved in the same folder where the first one in the original group was located.

Method 2: Using Vegas

a. Launch Vegas, and click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the files to be combined, then click "Open". The files will appear in the Project Media window in the upper left corner.

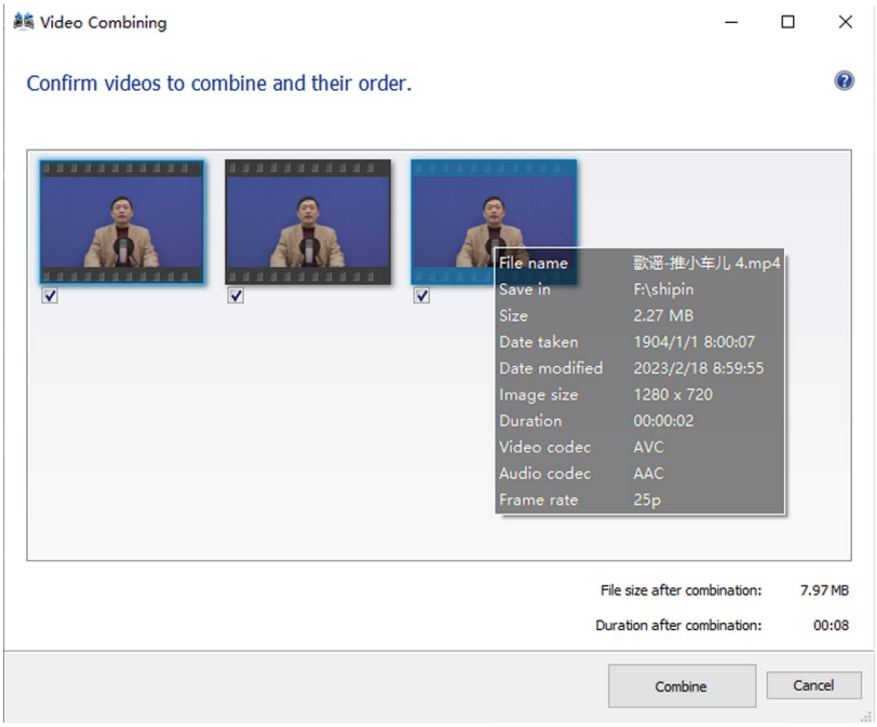


Fig. 20 Verifying information of the files and adjusting their order

b. In the Project Media window, click and hold the left mouse button, drag the files to the editing area below, and release the mouse. They will be arranged in the order in which they are imported. (See Fig. 21.)
c. Click the "|◀" button below the tracks, and press "Enter" on the keyboard. Preview the combined files in the Preview window to verify the information.
d. Click "File (F)>Render As (R)". In the "Render As" dialog box, "Save in" refers to the location of the video files after combining. Enter the names of the revised files in the box next to "File Name". In the box next to "Save as type", select "Sony AVC (*.mp4; *.m2ts; *.avc)". In the box next to "Template", select "AVCHD 1920×1080-50i". Finally, uncheck the box next to the "Render loop region only (L)" option ("✓" will disappear). (See Fig. 22.)

Fig. 21 Importing multiple video files to Vegas in sequential order

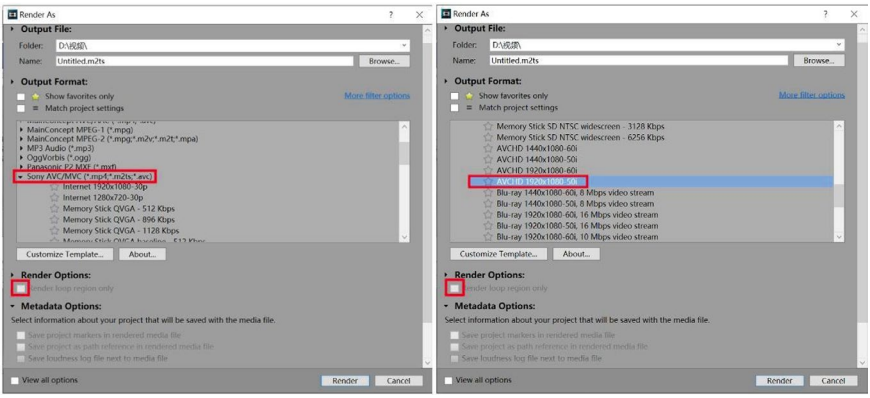


Fig. 22 Configuring the settings of the combined video file

e. Click “Save” to start rendering, and then click “Close” to exit when rendering is completed. Repeat the above steps until the combining is completed, then close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click “No”.

II. Filling Out Templates

1. Overview of the templates

After the survey is completed at each site, the following templates (see Table 3) must be filled out and transcribed by the fieldworkers. All of them have been compiled and provided by CPRLRC, except for the new template exported after transcribing the recording for “Oral Traditions and Culture”. No changes can be made to either content or formatting except for the samples. (CPRLRC has already locked cells with content that cannot be changed in Excel templates.)

2. Special considerations when filling out the templates

(1) Overview template

This includes 13 sub-forms: “Survey Site”, “Informants for Minority Language”, “Informants for Oral Traditions and Culture (1)”, “Informants for Oral Traditions and Culture (2)”, “Informants for Oral Traditions and Culture (3)”, “Informants for Oral Traditions and Culture (4)”, “Informants for Oral Traditions and Culture (5)”, “Informants for Oral Traditions and Culture (6)”, “Informants for Oral Traditions and Culture (7)”, “Local Putonghua Informants”, “Fieldworkers”, “Survey Status”, and “Language and Dialect Groups”.

Table 3 Overview of the templates

	Excel files	Word files
Informants for minority languages	Pronunciation.xls	
		Pronunciation description.doc
	Vocabulary.xls	
	Grammar.xls	
	Discourse.xls	
Informants for oral traditions and culture	Oral traditions and Cuture.xls 0001 Ballads.baf 0001 Ballads.eaf 0001 Ballads.xls …	
Others	Overview.xls	
		Transcription and proofreading log.doc

The Overview template uses as an example the information from the survey site in Gongshan, Yunnan Province, of the Dulong language and its Dulong River dialect. When filling out their own data, fieldworkers can either delete this information completely or edit it as needed.

Numbers such as "1" and "2" in the first row should match the ordinal numbers of the survey items in the "Survey Item Overview". Note that some more complex items (such as names of survey sites) have been split into multiple columns.

For cells with no survey results, indicate "N/A".

(2) Pronunciation template

This includes three sub-forms: "Tones", "Initials", and "Finals". The phonetic symbols and their paraphrases for tones, initials or consonants, and finals or vowels are entered in "Sample Word 1—Phonetic Symbols", "Sample Word 1—Paraphrases", "Sample Word 2—Phonetic Symbols", "Sample Word 2—Paraphrases", "Sample Word 3—Phonetic Symbols", and "Sample Word 3—Paraphrases". Do not add quotation marks around paraphrases.

(3) Pronunciation description template

Transfer the content under "Pronunciation description" in the Survey Item Overview to the pronunciation description template.

(4) Vocabulary template

Fill in survey results in the columns "Vocabulary 1: Phonetics", "Vocabulary 2: Phonetics", "Vocabulary 3: Phonetics" and "Notes". One row for each survey item. Place phonetic symbols in the columns "Vocabulary 1: Phonetics", "Vocabulary 2: Phonetics", "Vocabulary 3: Phonetics". If a survey item has only one expression in the minority language, place it in the "Vocabulary 1: Phonetics" column; any others (i.e., "different words or phrases used to express the same concept") go to "Vocabulary 2: Phonetics" and "Vocabulary 3: Phonetics".

If there are no expressions in the minority language, indicate "N/A" in column D (i.e., "Vocabulary 1: Phonetics" column). Do not leave blanks. Always include brackets.

(5) Grammar template

Fill in survey results in the columns "Sentence 1: Phonetics", "Sentence 1: Morphological Analysis", "Sentence 1: Literal Translation", "Sentence 2: Phonetics", "Sentence 2: Morphological Analysis", "Sentence 2: Literal Translation", "Sentence 3: Phonetics", "Sentence 3: Morphological Analysis", "Sentence 3: Literal Translation", and fill in "Notes" for each category. One row for each item. Enter phonetic symbols in the columns "Sentence 1: Phonetics", "Sentence 2: Phonetics", and "Sentence 3: Phonetics". Enter morphological analysis in the columns "Sentence 1: Morphological Analysis", "Sentence 2: Morphological Analysis", and "Sentence 3: Morphological Analysis". (No morphological analysis for linguistic expressions that lack morphological variants.) Enter literal translations in the columns "Sentence 1: Literal Translation",

"Sentence 2: Literal Translation", and "Sentence 3: Literal Translation". If a survey item has only one expression, place it in the columns "Sentence 1: Phonetics", "Sentence 1: Morphological Analysis" and "Sentence 1: Literal Translation"; any others go into the columns for "Sentence 2" and "Sentence 3".

(6) Discourse template

All speech recording materials will be transcribed into synopses in Putonghua, and entered into the discourse template. If there is no applicable survey content, indicate "N/A" in the "Putonghua Synopsis" column.

(7) Template for oral traditions and culture

Use the "Yubao Multimedia Annotation Software" to transcribe the videos into Chinese characters and phonetic symbols, and paraphrase them into Putonghua. Record the start and end times of each sentence in the video file. (Transcribed text will be segmented into sentences using "。!?;" end-of-sentence punctuation marks.) Save information about the time, place and informants of the recording for each item, for example, (20110318 Dulong River Dialect in Gongshan Dulong Language, Informant: John Doe). If the tone in singing is different from speaking, only record initials and finals, without the tones. Leave a space between syllables.

For "Ballads", at least one complete item lasting no less than 1 min should be transcribed. For "Stories", at least one complete item lasting no less than 3 min should be transcribed. For "Self-selected Items" (if applicable), at least one complete item lasting no less than 1 min should be transcribed.

After finishing the transcription of an item, export three files with extensions .baf, .eaf, .xls, respectively. Their file names (not including the file extensions) should match those in the standard audio and video files of that same item. The "Yubao Multimedia Annotation Software" (detailed instructions provided) and sample files exported after transcription can all be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/).

For oral traditions and culture items that are not transcribed, enter the first sentence in the "Content Tips" column of the "oral traditions and culture .xls" template (i.e., the same as recorded in the paper version of the Survey Item Overview). For items fully transcribed, there is no need to enter the first sentence in the "Content Tips" column, nor mark with "N/A". Just leave blank. For items with no applicable survey content, indicate "N/A" in the "Content Tips" column.

(8) When filling out and transcribing in the templates, complete the *Transcription and Proofreading Log* (located in "Survey Site File Package" in the "Electronic Documents to be Submitted\Templates\Others" folder).
(9) At this point, minority languages will not be transcribed. In the future, there will be separate projects on minority language transcription.

Refer to the instructions and samples in each template.

III. File Naming

1. Template file names

Transcriptions of the oral traditions and culture templates must have the same names as their audio and video files (except for extensions) when they are exported. All other templates are created in advance. Do not change their names.

2. Audio recording file names

Names of audio files should match those listed in the "Survey Item" column in the recording log, with the file extension ".wav". For example, "0001 Initial or consonant.wav", "0001 Sun.wav", "0001 Sentence 1.wav", "0001 Discourse_narrative.wav", "0001 Ballads.wav", and "0001 Narration_topic.wav". Byly (Beiyu Luyin) or YBSL will automatically generate standardized file names; with Audacity, Adobe Audition or other recording software, files must be manually named in accordance with naming standards.

3. Video recording file names

Names of video files (except for extensions) must match those listed in the "Survey Item" column in the recording log. For example, "0001 Initial or consonant.m2ts", "0001 Sun.m2ts", "0001 Sentence 1.m2ts", "0001 Discourse_narrative.m2ts", "0001 Ballads.m2ts", and "0001 Narration_topic.m2ts". YBSL will automatically generate standardized file names.

4. Photo file names

(1) Photo of the informant

The photo file name should be "0001 John Doe.jpg" or "0001 Jane Doe.jpg". If the same informant has more than one photo file, label them as "0001 John Doe.jpg", "0002 John Doe.jpg", and "0003 John Doe.jpg". Survey participants are listed in the following order: informants for minority languages, informants for oral traditions and culture, and informants for local Putonghua.

(2) Photos of the survey process

Files are named "0001 survey", "0002 survey", and "0003 survey", etc.

(3) For photos other than the above two categories, file names must be in the format of "0001 Gongshan.jpg", "0002 Gongshan.jpg", and "0003 Gongshan.jpg". Information may also be added to the name to briefly describe the content, for example, "0001 Gongshan_new year's eve dinner.jpg" and "0002 Gonghsan_fishing.jpg".

IV. Archiving Documents

1. Fieldworkers must organize documents according to the table format (see Table 4) and place them appropriately. For existing folders and documents, no changes should be made to either placement or names.
2. After transcribing items in oral traditions and culture and generating new files, save them in the folder "Survey Site File Package\Electronic Documents to be Submitted\Templates\Informants for Oral Traditions and Culture". Do not change the placement of any other template files.
3. Save audio files in the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Audio Recordings" folder.
4. Save video files in the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Video Recordings" folder.
5. Save photo files in the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Photos" folder.

V. Proofreading

1. All materials must be proofread manually at least twice, with the focus on transcribed Chinese characters and phonetic symbols, audio and video file quality, file names, and file locations. A verification tool dedicated to PPLRC can be downloaded from the website of CPRLRC (http://www.chinalanguages.cn/), which can help check file names, file locations, basic parameters of multimedia files, etc.
2. The first round of proofreading should be conducted by the survey team members themselves, the second by the survey team leader. At this stage, the proofreader must complete the *Transcription and Proofreading Log*.
3. Errors and omissions must be identified, corrected, or filled in, in a timely manner. If necessary, the survey should be re-done altogether.
4. The survey team leader is responsible for the quality of all the data.

When all these tasks are completed, in the "Electronic Documents to be Submitted" folder, add the names of the survey site and the language and dialect surveyed, e.g., "Electronic Documents to be Submitted for Dulong River Dialect in Gongshan Dulong Language". Submit the folder to the project leader together with the paper version of the *Survey Handbook* and the authorization letters of the informants.

Table 4 Folder structure of "Electronic Documents to be Submitted"

Folder	Folder	Folder	Folder	File
Electronic documents to be submitted	Templates	Informants for minority languages		Pronunciation.xls
				Pronunciation description.doc
				Vocabulary.xls
				Grammar.xls
				Discourse.xls
		Informants for oral traditions and culture		Oral traditions and culture.xls 0001 Ballads.baf 0001 Ballads.eaf 0001 Ballads.xls …
		Others		Overview.xls
				Transcription and proofreading log.doc
	Audio recordings	Informants for minority languages	Pronunciation	0001 Initial or consonant.wav …
			Vocabulary	0001 Sun.wav …
			Grammar	0001 Sentence 1.wav …
			Discourse	0001 Discourse_narrative.wav …
		Informants for oral traditions and culture	Oral traditions and culture	0001 Ballads.wav …
		Informants for local Putonghua	Local Putonghua	0001 Narration_topic.wav …
	Video recordings	Informants for minority languages	Pronunciation	0001 Initial or consonant.m2ts …
			Vocabulary	0001 Sun.m2ts …
			Grammar	0001 Sentence 1.m2ts …
			Discourse	0001 Discourse_narrative.m2ts …
		Informants for oral traditions and culture	Oral traditions and culture	0001 Ballads.m2ts …
		Informants for local Putonghua	Local Putonghua	0001 Narration_topic.m2ts …
	Photos	Informants	Informants for minority languages	0001 John Doe.jpg …
			Oral traditions and culture	0001 Jane Doe.jpg …
			Local Putonghua	0001 Jack Smith.jpg …
		Survey process		0001 Survey.jpg …
		Others		0001 Gongshan.jpg …

Appendix: Commonly Used Tools and URLs for Download

1. Submission portal for "Electronic Documents to be Submitted" (Minority languages in categories)
2. "Byly" (Beiyu Luyin) software
3. Audacity Recording Software
4. "YBSL" software
5. "YBSL Multimedia Annotation software"
6. Submission verification tool for PPLRC (Minority languages)

http://www.chinalanguages.cn/project/standardTools

PPLRC—Language and Culture Survey Handbook—Technical Standards

Part 1: Survey Standards[1]

I. Survey Sites

The sites chosen to be surveyed are to obtain data mainly about Chinese dialects, as well as about minority languages. They are situated mostly in places where Chinese dialects are spoken though other regional factors may also be taken into consideration. Survey sites for minority languages are selected according to their importance and research value.

These sites are generally situated within the administrative jurisdiction of one county. However, if the site is a large or medium-sized city (e.g., Beijing), the jurisdictions surrounding the metropolitan area may also be included. A dialect survey is mainly conducted at one representative location within the county. Dialect materials obtained from other locations will be read out by the main informant in that location. Cultural surveys are generally conducted at the sites of the dialect survey, but may include materials collected from other parts of the county.

[1] The Survey Standards in this handbook apply mainly to Chinese dialects. They can also be used as a reference for study and survey of minority languages. Standards dedicated solely to minority languages are developed separately.

Norms and Standards for Language Resources Protection in China,
https://doi.org/10.1007/978-981-99-9967-5_4

Notes

1. "Dialect survey" refers to the recording and compiling of dialect phonologies, dialect vocabularies, recording (or transcription) of texts in dialect, and audio/video recordings of dialect pronunciations. "Cultural survey" refers to video recordings and photography of objects, activities, demonstrations, and performances of items in the survey.
2. "Artistic Discourse in Dialects" includes the items in "Part 9: Vocal Performances". They are referred to as "Discourse" in this handbook, and include "sayings and proverbs, ballads, vocal folk art forms and opera, and storytelling in chant and narration."

"Pronunciation video recording" refers to recording both sound and image of how the informant appears when pronouncing a word (e.g., "屋 (wu) (room)"), not only the shape of the mouth. "Cultural video recording" refers to recording dialect-related cultural phenomena (e.g., "上梁" (shangliang) ("beam raising")).

II. Survey Participants

1. Linguistic informants

Each survey site must have one informant, also known as the main informant. However, for "Part 9: Vocal Performances", different informants may provide the "sayings and proverbs, ballads, and storytelling in chant and narration." The "vocal folk art forms and opera" are provided by the performers and singers themselves.

The main informant must meet the following requirements:

(1) Must be a male between 55 and 65 years of age.
(2) Must have been born and raised at the survey site in a monolingual family (both parents and spouse must be local) and never have lived elsewhere for long. He must speak a typical and authentic form of the local dialect.
(3) Must have received a basic primary or secondary school education (college education and above is generally not advisable).
(4) Must have a sharp mind, be responsive, and articulate, and speak distinctly.

Exceptions can be made if there are difficulties finding informants.
Eligibility criteria for alternate informants can vary according to circumstances.

2. Cultural survey participants

Cultural survey participants are local people who assist fieldworkers with cultural videos and photography, and introduce/explain relevant items. Their eligibility criteria are situation-specific. An informant can also serve as a cultural survey participant.

Representative inheritors will be given priority when survey items involve linguistic aspects of content in different Intangible Cultural Heritage Lists.

III. Survey Contents

Survey contents include "Overview" (survey sites, main informants, other informants and survey participants, fieldworkers, survey situation, and pronunciation) as well as items on dialects and cultures (Tables 1 and 2).

Collect survey items that involve linguistic aspects of content in different Intangible Cultural Heritage Lists (Table 2).

See below for specific points:

1. The surveys must focus on "real-life" dialect-related cultural phenomena (still in existence and in use today). However, also collect instances of "real-life" between 1949 and today (e.g., "油灯" (youdeng, oil lamp)).
2. For instances of "language expressions without corresponding physical objects", e.g., items that existed before (post-1949), but no longer now (e.g., "炕 (kang, heated brick bed)", "锔碗 (juwan, repairing pots and bowls)"), document them and put an explanation in the "Notes" column of the template. If a survey item exists in other places but not locally (e.g., "水饺 (shuijiao, dumpling)"), no record or explanation is needed.
3. For instances of "physical objects without corresponding expressions" (e.g., "屋脊 wuji, roof ridge)" that have no corresponding word in the dialect), take photographs, add a description and an explanation in the "Notes" column of the template. Information about some items can be verified by local specialists.

IV. Fieldwork Methods

1. Overview

(1) A team of fieldworkers will survey each site. The team leader or principal team member(s) must be native speaker(s) of the dialect or work in the local area. Each team should have one person who is familiar with audio and video recording, photography, and computer technology.
(2) The research project team will provide each survey site with a "Survey Site File Package" containing "Software and Samples" and "Electronic Documents to be Submitted".
(3) All sites must be surveyed in the field. Audio/video recording may be conducted at a different location as appropriate.

2. Preparation

(1) Select representative locations within the survey site.

Table 1 Classification of survey items on dialects and cultures

	I	II	III	IV	V	VI
Part 1: houses and buildings	Residences	Other buildings	Building activities			
Part 2: household items	Kitchenware	Bedroom furniture	Tables and chairs	Other housewares		
Part 3: clothing and accessories	Clothing	Footwear and headgear	Jewelry and accessories			
Part 4: food	Staple foods	Non-staple foods	Cooking			
Part 5: agriculture, crafts, commerce, and other professions	Farming	Farm tools	Handicrafts	Commerce	Other professions	
Part 6: daily activities	Daily life	Entertainment	Beliefs			
Part 7: weddings, births, and funerals	Weddings	Births	Funerals			
Part 8: festivals	Spring festival	Lantern festival	Qingming festival	Dragon boat festival	Mid-autumn festival	Others
Part 9: vocal performance	Complimentary and taboo language	Swear words	Sayings and proverbs	Ballads	Vocal folk art forms and opera	Storytelling in chant and narration

Table 2 Survey requirements for each of the nine parts

	Requirements	0		1–8	9	
		Overview (except pronunciation)	Pronunciation	Vocabulary	Vocabulary	Discourse
					Complimentary and taboo language, swear words	Sayings and proverbs; ballads; vocal folk art forms and opera; storytelling in chant and narration
Dialect survey	Written record	√	√	√	√	√ (only record the first sentence for each item)
	Audio recording		√	√	√	√
	Pronunciation video recording		√	√	√	√
Cultural survey	Cultural video recording			Refer to the rules in "[2]"		
	Photography			√	√	√

[2] Indicates that a "cultural video recording" must be shot by fieldworkers.

(2) Select linguistic informants.

Explain to the informants the "Survey Standards" and the "Survey Item Overview" to familiarize them with how to proceed and prepare. For "Part 9: Vocal Performances", run a "pre-survey" test beforehand. For the "Set Story[3]" item, provide the informants with the text in advance, so that they can read it first and be prepared to retell it naturally in their dialects for the audio recording. (No reading of the text during their retell.) They may paraphrase and lengthen the story.

(3) Select a location for recording and make appropriate preparations.

3. Fieldwork activities

(1) In the "Survey Item Overview", in the Pronunciation section of "Part 0: Overview" record only initials, finals, and tones of the sample characters. If a character is not spoken in the dialect, indicate "N/A".

Based on the materials gathered in the "Survey Item Overview", a preliminary system of initials, finals, and tones can be developed, which can be expanded based on vocabularies and other materials. The initials and finals can be ordered as in the *Syllabary of Dialect Pronunciations of Chinese Characters* (Language and Culture Press, 2003), compiled by the Office for Teaching, Education and Research of the Department of Chinese Language and Literature, Peking University.

Each initial, final, and tone should come with sample characters. (Sample characters for each tone category are directly grouped together in the Survey Item Overview; all characters surveyed for the purposes of initials are written after their initial in the chart; all characters surveyed for finals are written after their finals in the chart.)

Tone categories should be named according to commonly used rules in Chinese dialectology. For those that derive from tone splitting, phonetic details should be added to their names, e.g., "yinping" (voiceless initial *Ping* tone), "quan yinping" (all voiceless initial *Ping* tone), and "wei yinping" (voiceless initial *Ping* tone with finals). For a category that is a merger of multiple tones, if the category can be determined, use this as the category name. For example, when the *Shang* tone voiced obstruent is merged into the *Qu* tone in Beijing dialect, the tone is referred to as the *Qu* tone.

However, if the tone category after merging cannot be determined, its name follows the order "*Ping*, *Shang*, *Qu*, and *Ru*" (i.e., if the merger includes both voiceless *Ping* and *Qu* tones, but the category cannot be determined, use the "yinping" (voiceless initial *Ping* tone) as its name because it comes before the *Qu* tone in the sequence), and add a comment of "tone category to be determined" in the "Notes" column.

On the "Pronunciation description" page, provide details of the phonetic values of initials, finals, and tones, as well as rules for two-syllable tone sandhi,

[3] The "Set Story" in the survey is the "Story of the Cowherd and the Weaver Girl".

er-suffixation, diminutives, and other major phonetic alterations. Other phonemes of initials, finals, and tones that are not listed in the *Survey Handbook* are also recorded here.

(2) Complete Parts 1–9 of the "Survey Item Overview". These must be filled in first in the paper version of this Survey or in a special notebook, not directly entered into the template.

The first line in bold of each part indicates "group" names, and the second line (in GB2312) "item" names. These latter names are intended to give reminders and examples. When a site is surveyed, take the situation into account, refer to the items in the Survey Item Overview for a specific group, and record the dialect versions in the blank space that follows. Only a maximum of nine items can be documented under each group. (If necessary, divide into two columns.) If new items cannot fit into the existing group structure, they must be added to the last three "Additions" groups.

Each item (dialect vocabulary) is first labeled with a five-digit number, and after this a numeral "1", "2", "3" is added, but not more than "9". The Chinese character(s) come(s) next, followed by the phonetic symbols.

In the Discourse section, record the first sentence only for each item (write Chinese characters only instead of phonetic symbols). The complete audio and video transcripts will be placed together in a Word file.

Examples for documenting survey items:

Example 1:

Categories in the "Survey Item Overview":

1101 Houses (general appearance)

Bungalow, storied building, single-row house, multi-entry house, courtyard house, stilt house, fenced house, walled-in house, thatched hut, cave dwelling.

In the "Survey Item Overview" these are noted as follows:

11011屋 (room) Øɔ55

11012老屋 (old room) lə11Øɔ55

11013茅铺 (thatched hut) mə113phu0/铺 (hut) phu52

Example 2:

Category in the "Survey Item Overview":

9401 Nursery rhymes (children's songs)

Yi er san si wu, shang shan da lao hu; lao hu mei da dao, jian dao xiao song shu; song shu you ji zhi? Rang wo shu yi shu; shu lai you shu qu, yi er san si wu.

(One, two, three, four, five. I went to the mountain to hunt a tiger. I didn't see any tiger, but saw little squirrels. How many squirrels? Let me count. Count again and again: one, two, three, four, five.)

Ni pai yi, wo pai yi…

(You clap once; I clap once…)

In the "Survey Item Overview", these are noted as follows:

94011一二三四五 (yi er san si wu)[4]

94012你拍一 (ni pai yi)

Take note of "different words or phrases used to express the same concept" (e.g., thatched hut maowu can also be called "茅铺" maopu or simply "铺" pu). These should be arranged in descending order according to their naturalness and frequency of usage, separated by a slash "/".

If survey items in a "group" are not spoken in a dialect so there is no entry for that group, indicate "N/A".

Note written forms in the dialect (Chinese characters should be used).

(3) Based on the survey results in the "Survey Item Overview", edit or fill in the three "Dialect" columns of the "Recording Log" (shown in a colored background): pronunciation, vocabulary and discourse. All such recording logs are provided by the research project team. (The blank log is located in the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Recording" folder.)

The pronunciation recording log includes two parts. Entries from "01011 东 (east)" to "03254 局 (bureau)" are sample characters of "Pronunciation" in the "Survey Item Overview". Modify the Chinese characters in the "Dialect" column by recording spoken ones (without phonetic symbols), and deleting unspoken ones and indicating "N/A". For characters with more than one pronunciation, use a slash "/" between them, and write them in the form of "东 dong/东 dong" or "该 gai/该 gai/该 gai" (one phonetic symbol per character[5]).

In some dialects, the list of sample characters in the "Pronunciation" section may not cover all sounds (e.g., finals). To deal with this, the entries from "09101 additional characters" to "09350 additional characters" are used to add sample characters for different pronunciations: from "09101 additional characters" to "09110 additional characters" for samples of additional tones; from "09201 additional characters" to "09210 additional characters" for samples of additional initials; and from "09301 additional characters" to "09350 additional characters" for samples of additional finals.

In the "Dialect" column, the "Additional Characters" heading must be modified to include the new additional sample characters, and in the "Survey Items" column, the "Additional Characters" heading must also be changed to match the same

[4] Only the first sentence of the item is recorded. Same below.

[5] Here the phonetic symbols for "东" and "该" are used to indicate the pronunciation of modern standard Chinese.

samples. For example, if the first "additional character" is "波 (bo)", then in the "Dialect" column the "Additional Characters" heading must be replaced by "波 (bo)", and in the "Survey Items" column, the "09101 Additional Characters" heading must also be changed to "09101 波 (bo)". Note that each new final, initial, or tone may have only one additional sample character. Unused additional characters need not to be altered.

Vocabulary recording log: Fill in the "Dialect" column with the dialect vocabulary items using Chinese characters based on the survey results. For example, if there are three local expressions documented in the "1101房子 (house)" group, namely "屋 (room)", "老屋 (old room)", and "茅铺 (thatched hut)/铺 (hut)", they must all be written into the text box in front of "11011 房子 (house 1)", "11012 房子 (house 2)", and "11013 房子 (house 3)", respectively (in the "Dialect" column). Each group has a limit of nine entries. If there are no other local dialect expressions to record in the remaining boxes (i.e., those in front of the six remaining items from "11014 房子 (house 4)" to "11019 房子 (house 9)"), mark all as "N/A". If different words or phrases are used to express the same concept, use a slash "/" to separate them, e.g., "茅铺 (thatched hut)/铺 (hut)". For "spoken characters that have no written forms", use "#1", "#2", and "#3" plus phonetic symbols, e.g., "#1[xat2]" (see "I-9-(2)-7").

Discourse recording log: Based on the survey results, fill in the "Dialect" column with the Chinese characters of the first sentence of the discourse narrated in the dialect. Refer to the vocabulary recording log for other instructions.

Note: To save time, vocabulary and discourse template contents can be copied and pasted ahead of time into their recording templates. After recording, be sure to check and modify the pasted contents (e.g., the written forms of different words or phrases used to express the same concept).

(4) Record with the suggested recording and log input software. Pronunciation videos must record both video and audio together (cultural videos are shot separately on site where the activities take place). (Recording software programs Byly and Audacity, and their manuals are all located in the "Survey Site File Package\Software and Samples\Recording Software" folder.)

Shooting may have to take place on site for items under "Part 9: Vocal Performances" in "Vocal folk art forms and opera". This also applies to other party activities such as drinking games, including finger guessing and toasting songs. If using recording software on site is inconvenient, use a portable recorder instead, or later extract the audio band from the video recording (avoid separate audio recording).

(5) Cultural video recording and photography (under Cultural Survey) can be conducted separately from the dialect survey at different times throughout the year. Some dialect-related cultural phenomena may seldom be seen nowadays or have not been passed down. Special demonstrations can be requested from those familiar with these customs (e.g., certain handicrafts and games).

Materials can be collected at local museums and cultural centers (e.g., some traditional tools). More information can also be gathered from online sources.

During the survey new content may come to light and may be added to the original survey items. Request the principal informant to pronounce these new items together in one session, and fully document and record both audio/video.

Notes

1. All audio files, videos, and photos must be reviewed in a timely manner to ensure they are of adequate quality. To meet the requirements, early sections of audio files, videos and photos may be submitted first to the research project team for review.
2. If a survey item has multiple photos or videos, duplicates or poor-quality ones must be deleted in a timely manner. The quality of the remaining materials must be good enough to be included in the collection database, visual guide, multimedia electronic publications, and websites.
3. This research project requires repeated visits to survey sites, involves a variety of survey methods and many participants, so arrangements should be flexible and suit the circumstances. Thus, the first visits could focus on easy-to-find content, and later ones on other materials to fill in the gaps. If the fieldworker's mother tongue is the dialect under study, the first few visits could focus on cultural aspects (i.e., cultural video recordings and photography), and the dialect surveys left until later. Whatever the case, first complete all other tasks before conducting the audio and pronunciation video recordings.
4. At the end of the survey, request informants to sign a letter of authorization regarding all survey-related information. Survey participants who have been recorded both in audio and visual formats must also sign written authorizations where necessary. Copyright owners must also give consent for all audio-visual recordings and photos collected from other sources.
5. During the surveys and when documenting the results, always consult the existing literature and research materials on local dialects and culture.

V. Audio Recording

(I) Recording Devices

Two recording options are recommended. "Device Option 2" applies for those more proficient with computer recording devices. Other device models are also acceptable provided recording parameters and quality are met.

1. Device Option 1: laptop + professional recording microphone

(1) Laptop: use low-noise laptops, such as Lenovo ThinkPad X, T series (more than 2 GB memory; USB 2.0 ports; Windows XP, Windows 7 or Windows 8 operating system).
(2) Microphone (Cardioid, omnidirectional; with built-in sound card): Samson C03U.
(3) Pop filter: Alctron MA016.
(4) Microphone stand: Takstar NB-102.

2. Device Option 2: laptop + professional USB external sound card + professional recording microphone

(1) Laptop: same as Device Option 1.
(2) External sound card: Tascam US-144MKII.
(3) Microphone (headset, Cardioid): AKG C520.
(4) Monitor headphones (for fieldworkers): AKG K99.

Note: Cardioid microphones work better for a single person speaking, while omnidirectional microphones work better for exchanges between multiple persons. Users can select the pickup patterns using the Samson C03U's pattern selection switch: middle for Cardioid, right for Omni, and left for Fig. 8. (In Cardioid pattern, make sure the "Samson" logo faces the informant.)

If using the above devices is inconvenient in particular cases, use a professional portable audio recorder instead. It should save in PCM (*.wav) format. The Sony PCM-M10, Olympus LS-11, Edirol R-09HR, and their higher-version models are recommended.

(II) Preparations

1. Location

A professional recording studio is recommended.

If none is available, and find a quiet room. Close doors and windows, and turn off electric fans, air conditioners, fluorescent lights, cell phones, and other electrical appliances.

For on-site recording of activities such as opera or drama, make sure the sound is as clear as possible.

2. Microphone

Install the microphone stand, set up the pop filter, and place the microphone behind it. If there is no pop filter, do not place the microphone directly in front of the informant's mouth, so as to avoid "plosives" during recording. As much as possible, keep a fixed distance and angle between the informant's mouth and the microphone.

3. Sound card

For "Device Option 2", disable the computer's built-in sound card: open "Control Panel", go to "Performance and Maintenance\System\Hardware\Device Manager\Sound, Video and Game Controllers", and open "Sound, Video and Game Controllers"; right-click on the built-in sound card (the name varies from computer to computer, e.g., SoundMAX Integrated Digital HD Audio) and select "Disable".

Note: After the recording session is over, enable the built-in sound card again by following the above instructions and selecting "Enable" instead of "Disable".

4. Prompts during recording

Tell the informants in advance what prompts will be used for them to "Start Recording" or "Stop Recording", for example, by holding up a sign that says "Start" or "Stop", or using hand gestures.

5. Trial recording

To help informants understand the recording process and its requirements, and to test the audio effects, fieldworkers should ask the informants to record some of the survey items first, and then start the formal recording session.

(III) Recording Software

Recommended recording software is Byly (Beiyu Luyin). Audacity is used to monitor the audio and edit the files. It can also be used for recording if necessary. Other recording software, such as TFW, Adobe Audition, Cool Edit Pro, Sonar LE (included with the Samson C03U), and Cubase LE 4 (included with the Tascam US-144MKII), can also be used, so long as the format and quality of the recording meet the specified requirements. Note that some hardware may not always be compatible with the recording software. If there are problems, either adjust the settings, or replace the software or hardware as soon as possible.

1. Byly (Beiyu Luyin)

Byly (Beiyu Luyin) is a free recording software that is simple and user-friendly. It works for data collection of general language surveys, particularly of Chinese dialects. Byly (Beiyu Luyin) has the following features:

(1) Records survey items one at a time, and displays the waveform during recording.
(2) Automatically names and saves each recording file.
(3) Can automatically overwrite a file if an item is re-recorded.

2. Audacity (Note: This handbook uses the win-unicode-1.3.12 version to illustrate.)

Audacity is a free and widely used editing software for recording and audio files. Its user interface supports Chinese. It runs stably in Windows XP, Windows 7, Windows 8, and other operating systems. Audacity can be used to test background noise, record live sound, add labels and markers, edit recording files, batch trim audio files, and remove noise.

(IV) Recording Parameters

1. Basic parameters

Sound channel: Mono
Sample rate: 44,100 Hz
Sample format: 16-bit
Audio format: Windows PCM (*.wav).

In Byly (Beiyu Luyin) these are default settings.

Other recording software must be manually configured. In Audacity, click "Edit>Audacity Preferences".

(1) Configuring recording devices and sound channels

For "Device Option 1", click "Devices" and check that the "Playback Device" is the computer's built-in sound card, and the "Recording Device" is Samson C03U. (These are default settings so there is no need to reset. If the option Samson C03U does not appear, reboot the operating system, or uninstall the drivers of other external sound cards. To avoid problems, disable all other built-in recording devices first.) Select "Mono" from among the options for "Channels". (See Fig. 1.)

For "Device Option 2", click "Devices". Check that the "Playback Device" and the "Recording Device" are both set to Tascam US-144MKII, and select "Mono" from among the options for "Channels". (See Fig. 2.)

(2) Setting sample rate and format

Click "Quality" and select "44100 Hz" and "16-bit" in the drop-down menu under "Sampling". (See Fig. 3.)

(3) Setting Meter/Waveform dB range

Click "Interface" and select "−96 dB (PCM range of 16 bit samples)" in the drop-down menu to the right of the "Meter/Waveform dB range". (See Fig. 4.)

After completing these settings, click "OK".

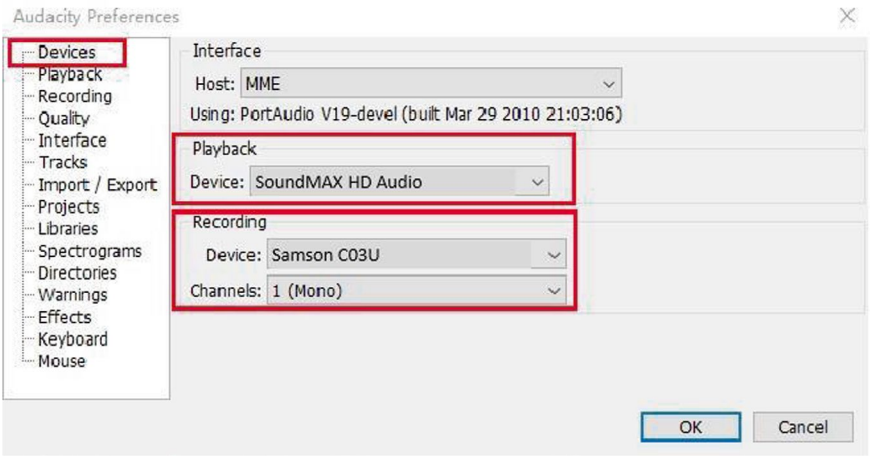


Fig. 1 Device Option 1: configuring recording devices

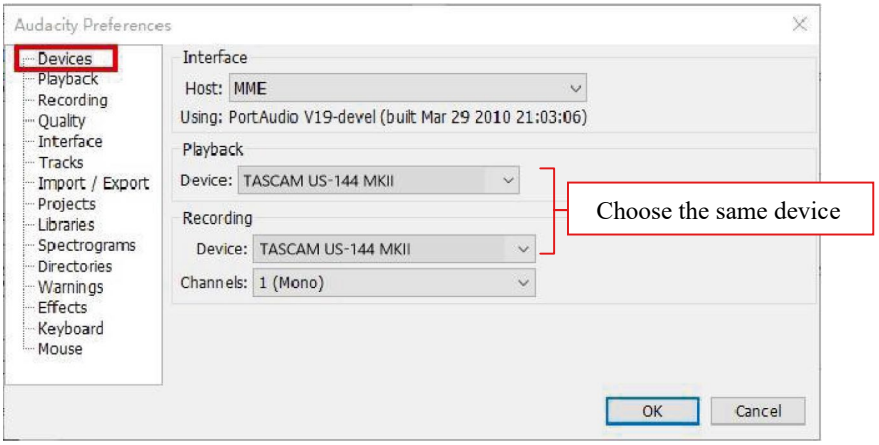


Fig. 2 Device Option 2: configuring the recording devices

2. Testing background noise and voice volumes

Before starting the formal recording, background noise and voice volumes need to be tested to ensure recording quality. Here is an example from Audacity.

(1) Adjusting the volume slider

Launch Audacity, move the mouse to the right end of the slider where the microphone icon is located. The cursor will take the shape of a left–right arrow. (See Fig. 5.)

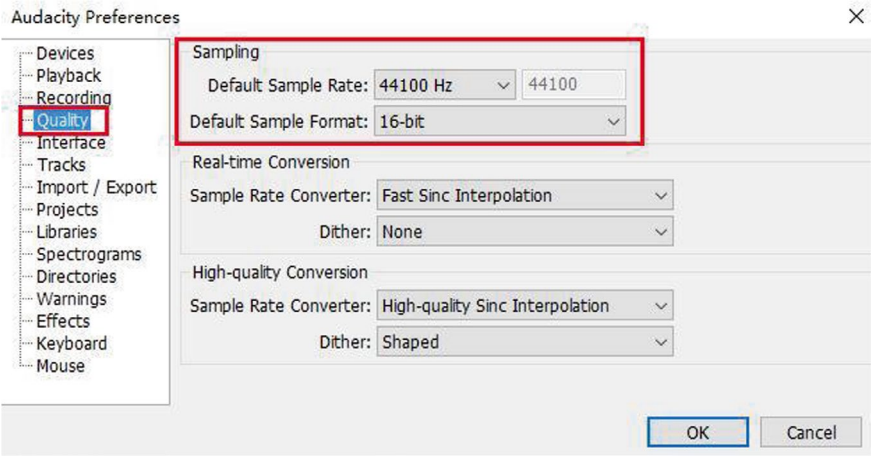


Fig. 3 Setting sample rate and format

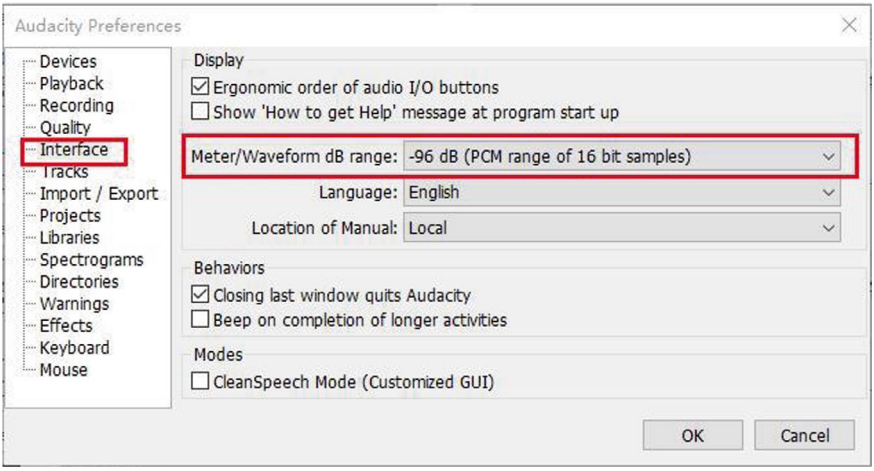


Fig. 4 Setting the Meter/Waveform dB range

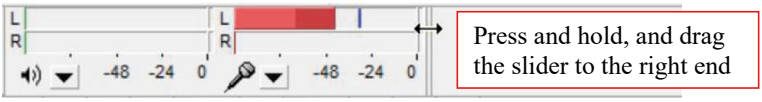


Fig. 5 Adjusting the volume slider

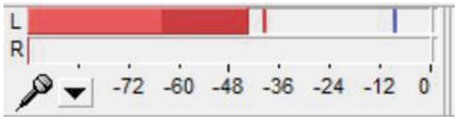


Fig. 6 The effect after adjustment

Hold down the left mouse button and drag the slider to the right, so that it fills the whole window. The scale "−72", "−60" etc. will appear. (See Fig. 6.)

This allows testing of both background noise and voice volumes. Note that Audacity uses negative intervals to indicate the volume range, from −96 to 0, with 0 indicating the upper limit, that is, the maximum value is 96 dB. A negative number indicates a value "less than" the upper limit (96 dB), e.g., −60 means the voice volume is 96 − 60 = 36 dB, and −18 means the volume is 96 − 18 = 78 dB.

(2) Testing the volume of background noise

Click the indented area on the upper right side of the microphone icon. When the dark red indicator bar is closer to the right, the background noise becomes louder; when closer to the left, it becomes softer. (See Fig. 6.) To ensure sound quality, it is best to set the background noise volume to below "−60" (e.g., "−72") and no greater than "−48". If it is greater than "−48" (e.g., "−36"), the noise will be too loud, and the noise source must be identified and removed, or the input volume lowered to an appropriate level.

(3) Testing the input volume

Before starting the formal recording, first record a few words, phrases, or sentences spoken by the informant. When the dark red indicator bar is closer to the right, the volume gets louder; when closer to the left, it becomes softer. (See Fig. 6.) For proper sound quality, the maximum volume should be set at "−18" or higher (e.g., "−12", "−9"). If this is set too low (e.g., "−36"), quality will be affected because the voice signal will be too weak. (However, some sounds such as voiceless ones are naturally weak, so adjust accordingly.) If the volume is greater than "0", it will be too loud and cause clipping distortion.

3. Adjusting the input volume

For "Device Option 1", the input volume needs to be adjusted through the computer's built-in audio system. Take Windows as an example. (See Fig. 7.) Open the "Control Panel" and go to "Sound". At this time, the "Default Device" in the "Recording" box should be "Samson C03U". Click "Default Device" in the "Recording" box and slide left and right the volume bar to adjust the volume accordingly. Increasing the input volume in this way will also increase the background noise volume, so it is necessary to find a balance.

For "Device Option 2", the input volume needs to be adjusted on the external sound card (Tascam US-144MKII). (See Fig. 8.) When the PHANTOM, MIC LINE and MONO switches are ON and the microphone is connected to the left

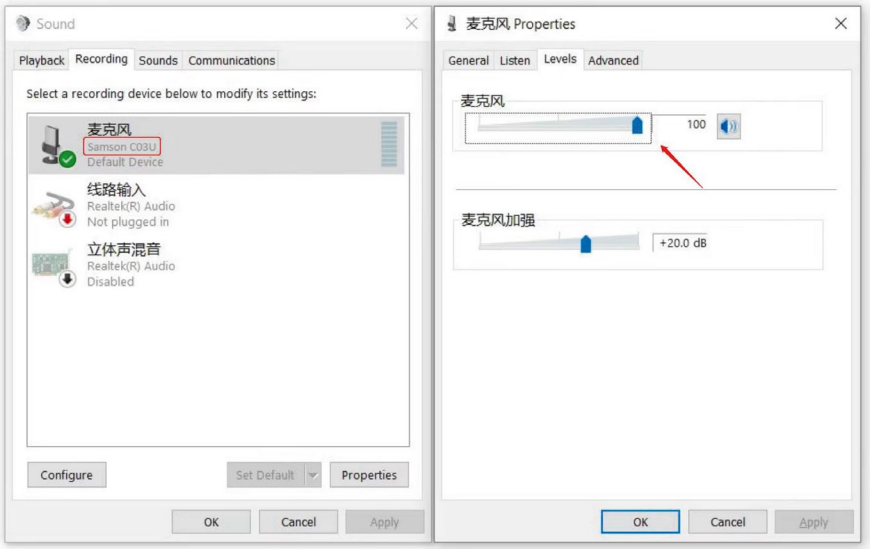


Fig. 7 Adjusting the input volume on the computer

Fig. 8 Adjusting the input volume on an external sound card

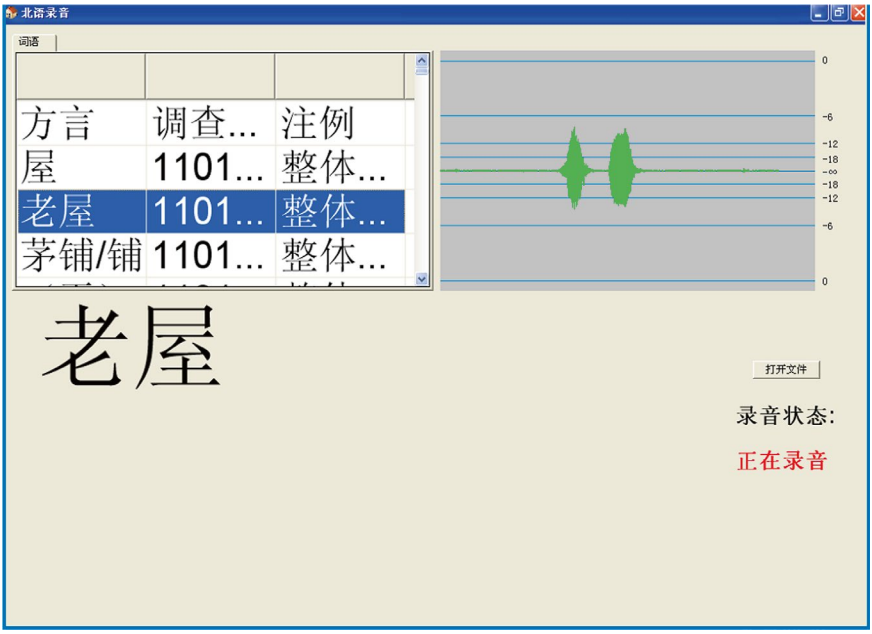


Fig. 9 Recording interface.“老屋”(lǎo wū) is a Chinese dialect expression for “house”

or right channel, the INPUT knob can be used to adjust the input volume. If the microphone is connected to the left channel, rotate INPUT L to adjust (indicated by a box in the figure); if the microphone is connected to the right channel, rotate INPUT R to adjust. When the indicator line on the INPUT knob moves towards “MIC”, the input volume rises; when it goes the other way, the volume falls.

Adjusting the input volume is possible by adjusting the distance between the microphone and the informant’s mouth, or by asking the informant to adjust the volume of his/her voice.

During recording, the fieldworker should regularly check the position of the microphone to avoid volume fluctuations due to the informant’s distance or loudness of speech.

(V) Recording Methods

Follow the steps below to use Byly (Beiyu Luyin) (see Fig. 9):

1. Launch Byly (Beiyu Luyin) software (byly.exe). Click “Open File”, and upload the recording log.
2. Select the row indicating the item that needs to be spoken and recorded. (At this point, this row appears in blue. Under the log table, a large word is displayed, indicating the same current item to be recorded.)

3. Press the "Enter" key to start recording. (At this point, the "Recording Status" shows "Recording in progress" in red, and its waveform is displayed.)
4. After recording one item, press the "Down Arrow ↓" to go to the next and continue recording.
5. When finished, press "Enter" to stop. (The "Recording Status" shows "Recording stopped" in red.)
6. If only one item needs to be recorded or re-recorded, select that item, press "Enter" to start, and press "Enter" again to stop.

Notes

1. After the large text below the log table appears, wait one second before the informant starts speaking. Again, after the speaking ends, wait one second before moving to the next row or stopping the recording altogether.
2. Recommended software environment is Windows XP, Windows 7, or Windows 8 with Office 2003. Do not open other recording software or audio players while this software is being used.

(VI) Recording Files

1. All recording files are in Windows PCM (*.wav) format.
2. Contents for each survey item should be saved in a separate file.

Even if the content for an item in "Discourse" is relatively long (sayings and proverbs, ballads, vocal folk art forms and opera, and storytelling in chant and narration), each must be saved in a separate file (e.g., "Story of the Cowherd and the Weaver Girl"). During the recording for a single file, try not to break off in the middle. (Informants may pause but shooting should continue.) Do not split into multiple files. If this happens, the files must later be edited and combined into one.

3. If an item includes more than one dialect expression (e.g., the character "灰" (hui) has two readings, namely [xuei55]/[fei55]; the concept of a thatched hut "茅屋" has two other expressions "茅铺 (maopu thatched hut)/铺 (pu hut)"), they should all be saved in one concept file, rather than each expression in a separate file.
4. If a character or a survey item is not spoken in a dialect (i.e., those marked as "N/A" in the "Dialect" column of the recording log), it can be recorded as an empty file or not recorded at all.
5. Sample recordings can be found in the "Survey Site File Package\Software and Samples\Samples\Corpus Collation\Recording" folder.

VI. Video Recording

1. Content

(1) In "Dialect Survey", all sample characters, words or phrases, and discourse are read out loud, and recorded as "pronunciation video recordings" (also called "pronunciation videos").
(2) The sign "  " in the "Survey Item Overview" indicates that "cultural video recording" is required for the items in this subgroup. Videotaping is not necessary if they cannot or need not be shot. Those without "  " must be shot if they are rare or in danger of being lost (also called "cultural videos").

2. Recording devices

Sony, Canon, Panasonic, and other top-tier brands of full HD digital cameras are recommended. However, any camera model may be used as long as the technical specifications and video quality meet the requirements.

3. Requirements for recording pronunciation videos

(1) Use a tripod to fix the camera, adjust its height, and point the lens at the upper half of the informant's body.
(2) Use a wired or wireless microphone compatible with the camera. Place the microphone in front of the informant in an appropriate position, or clip it to his/her collar.
(3) Shoot long shots if possible. If zooming is unavoidable, use an optical zoom lens rather than a digital one.
(4) Shoot against a neat, plain backdrop, preferably blue in color. (The location name can be displayed, e.g., "Huaiji, Guangdong province".)
(5) Choose a place with good light. The informant should face the camera. No shooting against the light.

4. Requirements for recording cultural videos

(1) Use a tripod if possible. A handheld camera must be kept as steady as possible.
(2) Shoot long shots if possible. If zooming is unavoidable, use an optical zoom lens rather than a digital one.
(3) Preferably shoot a single item or event in one complete video session. Avoid breaks in the shooting, which will generate multiple video files.

5. Methods for recording pronunciation videos

Below are several different ways to shoot the pronunciation video recordings. Those who are proficient with post video editing can choose to record multiple items in one continuous shoot. In fact there are no strict rules about how to shoot

the videos so long as their parameters and quality meet the specifications for the audio quality.

(1) Shooting items one by one

Record each survey item and save it in a separate file. See below for step-by-step instructions:

a. The fieldworker first reviews the pronunciation of each survey item with the informant. After the correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts the recording and gestures to the informant to speak directly to the camera.
b. When the speaking is finished, the recorder operator stops recording and gestures to the camera operator who stops shooting. The fieldworker then reviews the pronunciation of the next survey item with the informant, and the process is repeated.

Recording items one by one will generate multiple video files. To facilitate later data arrangement, it is recommended that before recording the first item in a series of items (e.g., a set of 10 or 20 items), a separate video file be made to record that first item number (e.g., the camera operator could read out the number or write it on a piece of paper and save it as a separate file). This acts as a marker for the series' location. (These marker videos can later be deleted in post editing.)

(2) Shooting multiple items together

Multiple survey items can be recorded in one take and stored in one file. There are two ways to accomplish this:

First, the informant and the recorder operator view the same laptop screen together. See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the laptop screen and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can be deleted later in post-production editing.) Make sure that the informant's face, the prompts on the

computer screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

Second, the informant views a separate computer monitor or projection screen (i.e., a separate computer monitor or screen that is plugged into the laptop). See below for instructions:

a. The fieldworker first reviews with the informant the pronunciation for the entire batch of survey items. Once correct pronunciation is confirmed, the camera operator starts shooting and gestures to the recorder operator who starts recording, and in turn gestures to the informant to speak. The informant then follows the prompts displayed on the separate monitor or screen, and reads the items out loud one by one.
b. After finishing the whole batch, the recorder operator stops recording and gestures to the camera operator who then stops shooting. This batch is done. The fieldworker then reviews the pronunciation of the next batch with the informant, and the process is repeated.

When doing batch recordings, the item numbers should be recorded at the start of the video file (i.e., when shooting begins, the camera operator should read out the first and last item numbers of this batch). This marks where the batch fits within the whole set of survey items. (This numbering information can later be deleted in post-production editing.) Make sure that the informant's face, the prompts on the separate computer or projection screen and the camera lens are all lined up. The informant's gaze should look directly at the camera, neither raised nor lowered.

6. Video files

(1) The highest quality setting of the shooting devices should be used, and shooting must be done in full HD mode. Parameters must be no less than $1920 \times 1080/50$i. The specific file format depends on what is available with the camera device, such as *.m2ts and *.mpg.
(2) Each survey item should be saved as a separate file.

For convenience, several pronunciation video recordings may be shot one after the other without a break. (They should be placed in subgroups, such as tones shot in four files following tones classification, namely *Ping*, *Shang*, *Qu*, and *Ru*; initials shot in four files following initials classification, namely *Bangxi*, *Duanxi*, *Zhixi*, and *Jianxi*; and finals shot in three files following finals classification, namely *Yinshengyun*, *Yangshengyun*, and *Rushengyun*. Contents for each subgroup are then collected into one big file.) These can later be divided at the collation stage. For "cultural video recording", multiple videos may be shot for a single item if necessary (e.g., different locations, different stages, etc.).

(3) Sample recordings can be found in the "Survey Site File Package\Software and Samples\Samples\Corpus Collation\Video Recordings" folder.

VII. Photography

1. What to photograph

(1) All survey items must be photographed if possible, and multiple photos may be taken of a single item if necessary (e.g., different angles, different configurations, etc.). However, leave blank if photographing is not possible. Whether and how to photograph items in "Part 9: Vocal Performances" must be decided on a case-by-case basis. (These are called "survey item photos".)
(2) Two photos of each informant and each cultural survey participant are required (i.e., upper-body and full-body shots). (These are called "survey participant photos".)
(3) Illustrative photos of the process and scene of the survey must be taken. (These are called "survey process photos".)

2. Photography devices

Digital cameras, preferably Canon, Nikon, or other top-tier brands of digital SLR cameras of at least 12 megapixels.

3. Requirements for photographing

(1) Use a tripod if possible. A handheld camera must be as steady as possible to avoid defocusing.
(2) Shoot long shots if possible. If zooming is unavoidable, use an optical zoom lens rather than a digital one.
(3) Photograph against a neat, plain backdrop. However, objects relevant to the topic may remain.
(4) Some objects (e.g., bamboo hats) can be both still or in motion. Generally photograph them when they are still. Where conditions permit, take them in motion too.
(5) Avoid photographing against the light.
(6) Photograph in panorama orientation where possible.

4. Photo file format

(1) Set to the highest quality format (i.e., the highest resolution and definition). The files must be in *.jpg format, ideally with a resolution no less than 4368×2912 pixels.
(2) Sample photos can be found in the "Survey Site File Package\Software and Sample\Corpus Collation\Photos" folder.

VIII. Notation

(I) Font and Format

1. All phonetic symbols in the templates are entered in IpaPanNew font. Tone pitch values following the phonetic symbols are also entered in IpaPanNew font. No need to change fonts. If phonetic symbols cannot be displayed in this font, use the Unicode encoding system.

   All other characters are in Song font.
2. All zero initials are indicated by its symbol "Ø" and cannot be left blank. For example, in the Beijing dialect: 王(wang) Øuaŋ35.
3. Use "ʰ" (not in superscript) for the aspiration symbol, rather than "p^h" and "pʻ". Do not use superscript to annotate numbers that indicate tone pitch. For example, in the Beijing dialect: 怕(pa) pha51 (fear). (However, superscript can be used when writing by hand.)
4. For phonetic units such as "m n ŋ l", which can alone form syllables, do not add short vertical lines above and below.
5. Enter "ts" as two separate symbols, that is, "t" and "s". The same applies to affricate consonants such as "tʂ tɕ". In the case of "ã", enter two separate symbols "a" and the nasal vowel "˜". The same applies to other nasal vowels. Use "ɡ" instead of "g". Use vowel "ɤ" instead of "ɤ". Use the phonetic symbol "ː" instead of the colon ":" for long vowels.
6. Do not add additional symbols to phonetic symbols, such as "o̬ o̲". The actual phonetic values can be explained in detail in the "Pronunciation Description" section in the "Survey Item Overview". Note that nasalized and long vowel symbols are not additional symbols.
7. All tone pitches are indicated in numbers, for example, in the Beijing dialect: 妈 (ma) ma55丨麻(ma)ma35丨马(ma)ma214丨骂(ma)ma51. If there is a break in the middle of a tone, use "0", e.g., in the Yugan dialect: 割(ge)koʔn304丨白(bai)pheʔŋ303.
8. All syllables are hyphenated without blank spaces in between. For example, in the Beijing dialect: 下雨(xiayu) ɕia51Øy214.
9. If a character, subgroup, or other item is not spoken in a dialect, mark as "N/A" in the "Survey Item Overview", recording log, and templates.
10. Whenever possible, follow commonly used notation standards of Chinese dialectology. For example: vowels [n] and [ŋ̍] should be separated; when [tɕ] initials are spelled together with a class of finals that begin with i, they should be recorded with the symbols [tɕia], not [tɕa], etc.; when [k] initials are spelled together with a class of finals that begin with u, they should be recorded with symbols [kua], not [kwa] and [k^wa].

(II) One Character with Multiple Pronunciations

1. When noting the pronunciation of sample characters, multiple pronunciations of that same character must be recorded and a note added to explain.
2. When noting vocabulary items, only note the pronunciation that is used most naturally and commonly in the spoken language. Ignore other pronunciations.
3. When transcribing "Discourse" materials, transcribe exactly as pronounced in real life (since in any given speech, there will be one pronunciation only).

(III) Sound Alteration

1. Tone sandhi

Only note the actual tone pitch, which could be for a character with a single citation tone or a tone sandhi (no symbols added in front of tone sandhi), e.g., in the Beijing dialect: 玛瑙 (manao) ma35nau214.

All voiceless syllables are marked as "0", e.g., in the Beijing dialect: 桌子 (zhuozi) tʂuo55tsɿ0 | 来了 (laile) lai35lə0.

2. Er-suffixation and diminutives

Only note the pronunciation in actual use, not the original sound of the character, for example, in the Beijing dialect: 面儿miɐr51; in the Tangxi dialect: 女儿 nɑŋ341 (meaning "girl", in which the original pronunciation of "女" is [na113]).

3. Other sound alterations

For changes of initials, finals, and tones caused by sound linking and other factors, use the same method as for "diminutives", i.e., only note the pronunciation in actual use, not the original sound. For example, in the Beijing dialect: 埋怨 man35Øyan0 (meaning "complain", in which the original pronunciation of "埋" is [mai35]).

If other problems occur, refer to the above principles and methods to handle on a case-by-case basis, and add an explanation.

IX. Orthography

(I) Principles

1. Use standard Chinese characters

Always use modern standard Chinese characters.

(1) Use official modern simplified standard Chinese characters (no other simplified versions). No conversions back to traditional characters, e.g., note “后天” not “後天” and “面粉” not “麵粉”. If necessary, examples or notes can be added in brackets after the word, e.g., “干 (～燥)” (dry), and “干 (～活)” (do).

(2) Avoid using non-standard Chinese characters.

2. Use root characters

Use a root character if there is one. (For characters in Simsun [Founder Extended] only.)

3. Consistency

Use the same character for the same morpheme.

Morphemes with the same etymology may be depicted locally by different characters due to variations in pronunciations or usage; however, a single consistent written form must be used in this survey. Employ a root character if there is one. If not, then as much as possible, always use the same vernacular character, homophonic character, or epithet, e.g., in the Hakka dialect, “偃” must always be written as “我”, and in the Cantonese dialect, “佢” as “渠”.

(II) Guidelines

1. Root characters

(1) Should there be several ways to write a root character (orthodox character), choose the most commonly used one, e.g., the character “蕃” (fan) in expressions such as “蕃茄” (fanqie) and “蕃薯” (fanshu) is written as “番” (fan); the character “包” (bao) in expressions such as “包谷” (baogu) and “包米” (baomi) is written as “苞” (bao).

(2) Some characters in pronunciation and meaning may seem to be root characters, but it is hard to confirm. They can temporarily be treated as root characters, e.g., “坊” (fang) in “村坊村儿” (cunfang cun’r).

2. Vernacular characters

“Vernacular characters” refer to Chinese character variants that are widely written in a dialect. They include two types: one is self-created characters, and the other is characters borrowed from regular Chinese orthography. In the former are “尕”, “躲”, and “挈”, which all mean “small” in their dialects; the latter includes “企 (stand up)” in Cantonese.

(1) If there is a root character, it must be used even if there is a vernacular one as well, e.g., in the Cantonese dialect, “企 (stand up)” should always be written as “徛”.

(2) If there is no root character, and the vernacular one is commonly used, or there are no appropriate homophones, the vernacular character can then be

used on a case-by-case basis. If necessary, add a note stating that this is a vernacular character, e.g., “尕 (small),” “惚 (wash).”

3. Synonymic characters

“Synonymic characters” have the same or similar meaning. They are not root characters. For example, “拍 (beat)” in the Chaoyang dialect is written as “打”; in the Haikou dialect, “细 (small)” is written as “小” (both “打” and “小” are synonymic characters).

Do not use synonymic characters.

4. Phonetic characters

“Phonetic characters” are ones with “vague meanings and unclear roots”. They are mainly used as suffixes, auxiliaries, interjections, and some pronouns, as well as other elements for vague meanings, e.g., in Putonghua: “达溜～” (da (stroll)) and “乎黑～～ (hu (dark))”.

(1) Use phonetic characters on a case-by-case basis.
(2) Conditions for using phonetic characters: if possible, choose commonly used characters and ones with vague meanings. Take into account the different dialect pronunciations but also as much as possible maintain conformity of orthography across dialects. No symbols need to be added to phonetic characters, e.g., the prefix “圪” in the Jin dialect.

5. Homophonic characters

If no root, vernacular, or phonetic characters exist, use homophonic ones. These are characters that have the exact same phonetic sound as in the dialect. Sometimes no completely homophonic character can be found, so find the closest and add a note to explain.

Conditions for using homophonic characters: if possible, choose commonly used ones and maintain conformity of orthography across dialects. Homophonic characters are indicated by adding an equal sign (“=”) behind, e.g., “促=看 (look)” in the Chun’an dialect. (For Excel and Word template files, the equal sign does not need to be in superscript, but it is recommended to use superscript when information is written manually.)

6. Combined sound characters

For a character whose pronunciation is a combination of two sounds, if possible, use an existing combined sound character, e.g., “甭” [pəŋ35] in the Beijing dialect, “勹 (not)” [fiæ412] in the Suzhou dialect. If there is no existing combined written form, first use the original form placed in square brackets “[ ]” followed by the phonetic symbol, e.g., “[二十]” [dziap5]; in the Chaoyang dialect, and “[知道]” [tʂɔ213] in the Kaifeng (Henan province) dialect.

However, all the er-suffixation in combined sound characters must be written with the normal "儿" character, e.g., "面儿"[miɐr51] in the Beijing dialect.

7. Spoken characters that have no written forms

These characters are those having no appropriate root, vernacular, phonetic, or homophonic characters; in dialectology works, they are usually written as "□".

Within a single dialect region, such morphemes are annotated "#1", "#2", "#3", etc., following their order of occurrence. Each has one code, which is used for the same morpheme on different occasions. Each region has its own system that differs from those of other dialects.

8. Fonts and formats

(1) All Chinese characters are in 5-point Song font.
(2) No blank spaces between Chinese characters.
(3) A colon ":" is used between explanations and examples.
(4) A single vertical line "|" is used between examples.
(5) Optional components of certain words must be considered as "different words used to express the same concept", e.g., "桌 (zhuo)" and "桌子 (zhuozi)" must be recorded separately, not combined as "桌 (子) (zhuo (zi))".

Part 2: Corpus Collation

Corpus collation includes audio-visual editing, data entry into templates, standardizing of file names, document archiving, and proofreading.

When organizing and compiling data, set the computer to show file extensions. In Windows XP, click "Folder Options>View" and uncheck "Hide Extensions of Known File Types".

For locating files, refer to Table 4.

Before starting general processing of the data, the survey project team should first submit for review a small number of processed templates, audio, video, and photo files to the research project team to identify and correct problems in a timely manner.

I. Audio-Visual Editing

The purpose of editing is to delete, cut, and combine related contents in audio or video files and to eliminate redundancy, so that "each survey item is saved in a separate file" as required by the *Survey Handbook*.

(I) Audio Files

1. Editing software

Audacity and Adobe Audition are recommended.

2. Editing

Before editing, make a backup of the original files and save in another location. (If an automatic backup file is generated during editing, it can later be deleted after editing and proofreading are completed.)

Below is an example using Audacity.

(1) Deleting

Extra-long silences at the start or end of recordings, or sound interference (such as coughing) should be removed.

a. Launch Audacity, click "File>Import>Audio", and select the recording file with the parts to remove. When the import is completed, the waveform of the file will appear in the Audacity window.
b. Move the mouse to the starting point of the contents to be deleted, hold down the left button, and drag to the right towards its end point. (See Fig. 10.)
c. Press the "Delete" key on the keyboard to complete the deletion. (See Fig. 11.)
d. Click "File>Export" and select the save location of the edited file. (If it is saved in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". When the deletion is completed, close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

(2) Combining

If the recording for a survey item is divided into multiple files (e.g., a story is divided into two or more), these should be combined into one single file when the data is later collated.

a. Launch Audacity. Click "File>Import>Audio" and hold down the "Ctrl" key on the keyboard. Select the files to be combined by checking them one by one, and click "Open". Their wave forms will appear in the Audacity window.
b. Click "▼" at the top left of each audio track. Click "Name", and the file name will appear in the "Track Name" dialog box. Move the mouse to the beginning of the last audio file, hold down the left mouse button and drag it to the right until all the files to be combined are selected. (See Fig. 12.)
c. Click "Edit>Copy". Move the mouse to the end of the previous recording file and click. A thin line will appear here, representing the location where the two recording files are combined. (See Fig. 13.)

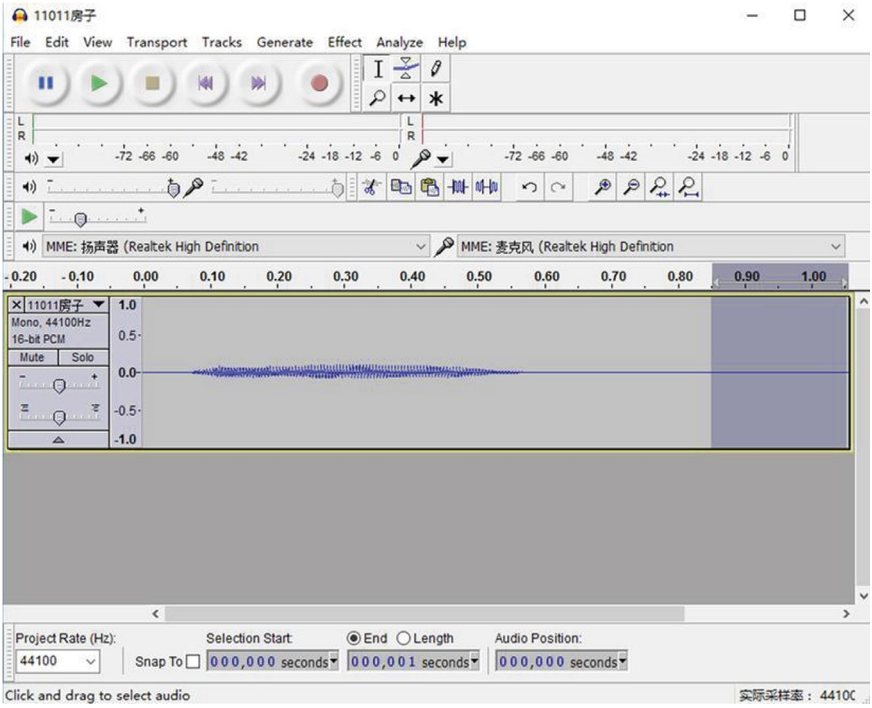


Fig. 10 Selecting the content to be deleted

d. Click "Edit>Paste". Click the "×" at the top left of the audio track of the last recording file (left of the file name), and then click "View>Adapt Window". At this point, the last audio file has been added to the end of the previous one. (See Fig. 14.)
e. Click "File>Export", and select the location to save this combined file. (If this is in the same location as the original file, a dialog box will appear asking whether to replace the original file. Click "Yes".) In the "Edit Meta Information" dialog box, click "OK". Close and exit Audacity. If a dialog box appears asking whether to save the changes, click "No".

(II) Video Files

1. Editing software

(1) The recommended video editing software is the one included on the CD-ROM provided with the camera, e.g., Sony PMB, Panasonic HD Writer AE, and Canon PIXELA Video Browser.

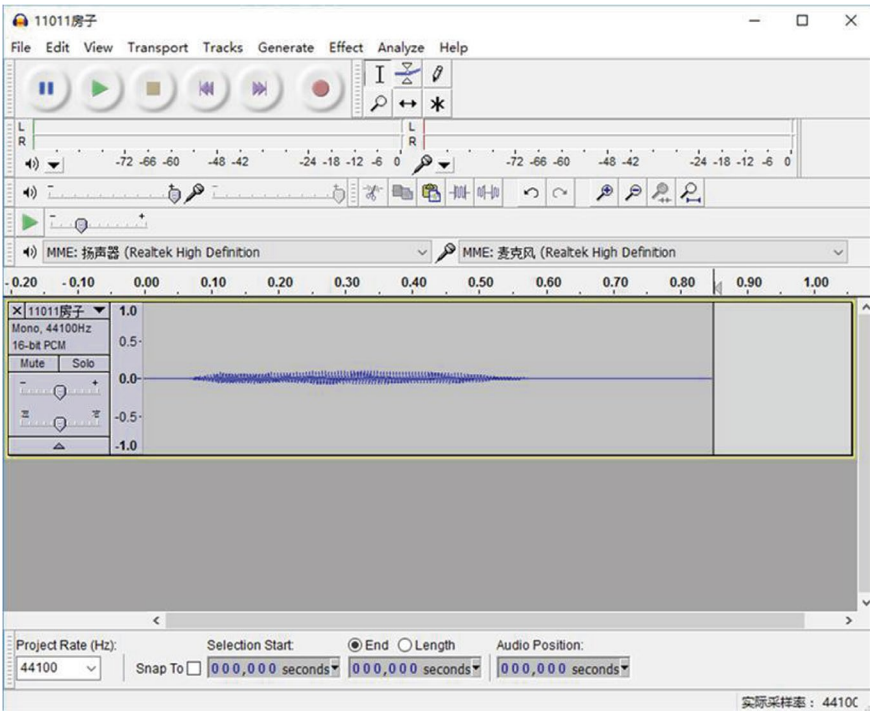


Fig. 11 Deletion completed

Using software included with the product is considered a lossless operation, which means relatively low configuration requirements for computers, but higher editing efficiency. However, do not use editing software across different camera brands. (For example, do not use Sony PMB software to edit video files captured by Canon cameras.)

(2) If no editing software is included with the camera, use non-linear video editing software such as Sony Vegas Pro 9.0 or newer.

2. Editing

A copy of the original video files must be saved before editing. If an original video file does not need editing (i.e., it already meets the requirement that "each survey item should be saved in a separate file", and there is no redundant information in it), it still must be saved separately with the same name, to be used in the final edited version.

Below are instructions based on Sony PMB 11.0 (hereafter referred to as "PMB") and Sony Vegas Pro 19.0—Chinese version (hereafter referred to as "Vegas").

(1) Splitting videos

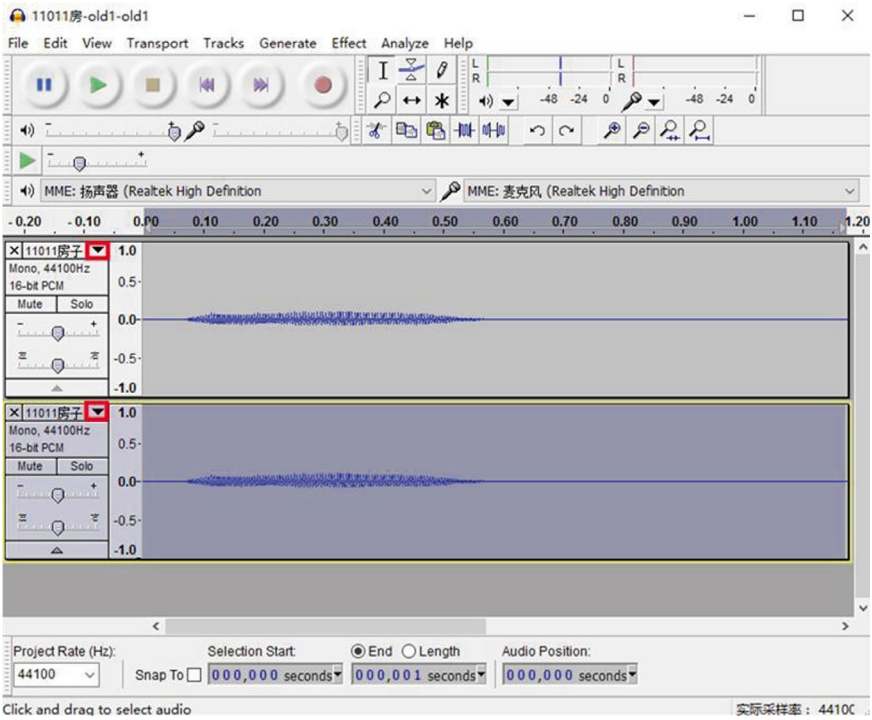


Fig. 12 The last file selected together with all other files to be combined

If a video file includes contents for more than one survey item (e.g., all the original "pronunciation video" files for all items in a subcategory), it should be split into multiple parts, one for each item.

Method 1: Using PMB

a. Launch PMB and click "Tools > Settings". Then click "Add Folder" at the left side of the dialog box. In the right window, check the folder where the video file to be split is located, and click "OK". At this point, all the video files in the folder will appear in the PMB editor.

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left and the "Details" button at the bottom right of the editor. Detailed information about the video files will appear. (See Fig. 15.)
c. Select one of the video files to split by clicking on it in the list, and then click "Manipulate > Edit > Trim Video". The Video Trimming editor will appear.
d. Click and hold down the left mouse button, drag the small flags on both sides of the progress bar below the video playback window to set the "IN Point" (the

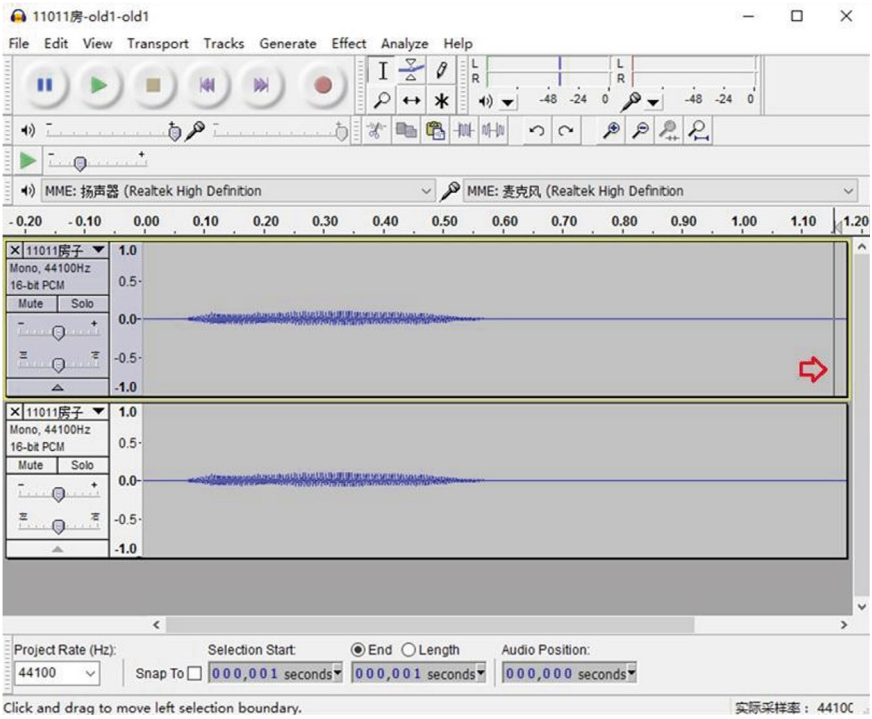


Fig. 13 Confirming the location of combined audio files

starting point of the video file after splitting) and the "OUT Point" (the end point of the video file after splitting). The left-pointing flag is used to set the IN Point, the right-pointing flag the OUT Point. (See Fig. 16.)

As the flags are dragged, the photos and times of the "IN Point" and "OUT Point" displayed in the two video preview windows on the right will change correspondingly.

Apart from dragging the flags, the IN and OUT points of the video file to be split can also be set by using the "Set IN Point" and "Set OUT Point" buttons at the bottom right of the video playback window.

e. After setting the IN and OUT points, click "Save Edited Video" and enter the names of the split video files in the "File name" dialog box. The "File type" should be consistent with the original file. Click "Save". Close and exit PMB.

The split video files should all be saved in the same folder as the original file.

Method 2: Using Vegas

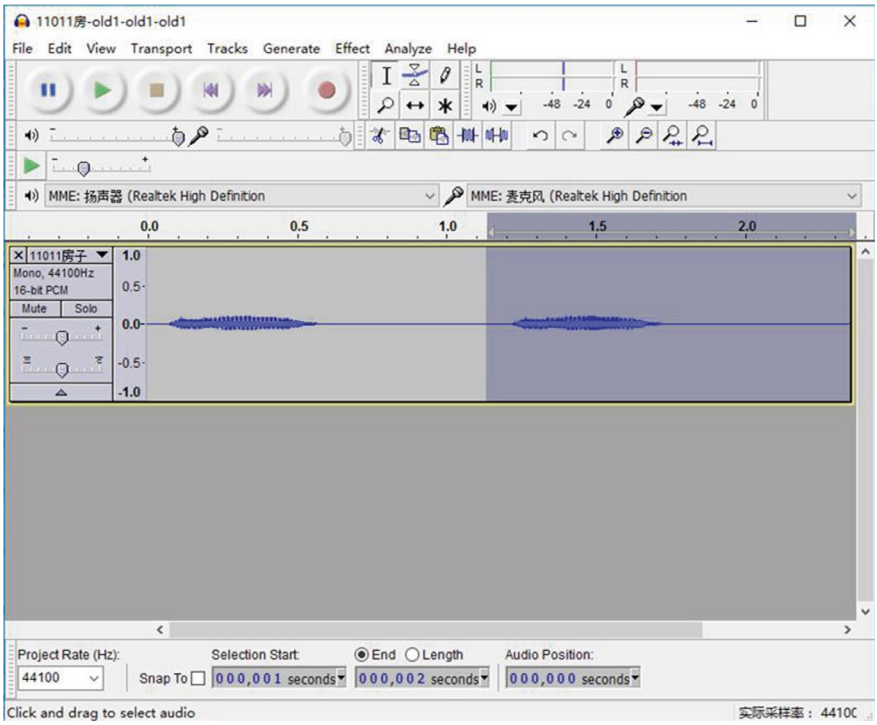


Fig. 14 Two audio files combined

a. Launch Vegas. Click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the file to be split. Click "Open", and the file will appear in the Project Media window in the upper left corner.
b. In the Project Media window, click and hold the left mouse button, drag the video file to the editing area (Timeline) below, release the mouse and drop it there. The video and audio tracks as well as the Video Preview window will appear in the Timeline after successful uploading. (See Fig. 17.)
c. Click the "|◀" button below the Timeline. Press the "Enter" key on the keyboard, and the Video Preview window will start to play the video from the beginning. In the Video Preview window, set the IN and OUT points of the video file to be split.
d. While the video is playing, press "Enter" at the IN point, and the video will be paused in the Video Preview window. Press the "M" key on the keyboard, and a small flag will appear at the IN point; press the "Enter" key again, and the video will start playing again. At the end of the video, press "Enter" to stop playback. Press "M" again, and another small flag will appear at the end. Both IN and OUT points are now set.

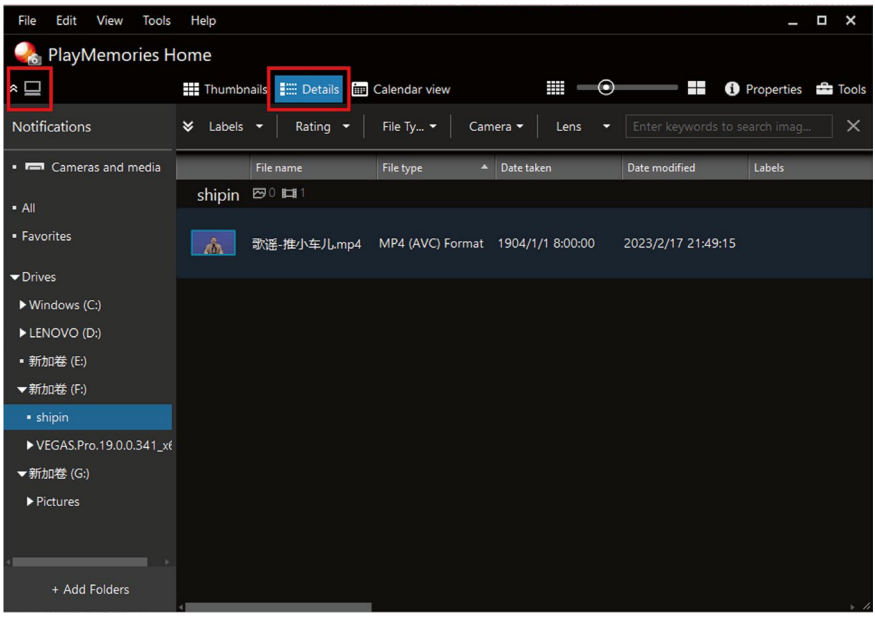


Fig. 15 Detailed information about the video files

When the "M" key is pressed, the input method must be in English. Click "Insert (I) > Mark (M)" to mark it.

After the IN and OUT points are set, click the IN point and press "Enter" to preview the video and confirm the settings are correct.

e. Click and hold the left mouse button above the video track at the IN point of the recording (first small flag) and drag it to the right to the end of the contents (second small flag). At this point, the two tracks in the selected area are in blue, with a yellow triangle mark at the IN and OUT points. (See Fig. 18.)

f. Click "File (F) > Render As (R)". In the "Render As" dialog box, "Save in" refers to the location of the video files after splitting. Enter the names of the revised files in the box next to "File name". In the box next to "Save as type", select "Sony AVC (*.mp4; *.m2ts; *.avc)" and in the box next to "Template", select "AVCHD 1920 × 1080-50i"; check the boxes next to "Render loop region only (L)" and "Save project markers in rendered media file (K)" options so that the "✓" mark appears. (See Fig. 19.)

g. Click "Save" to start rendering, and click "Close" to exit the rendering page when completed. Repeat the steps above until the splitting is completed. Close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click "No".

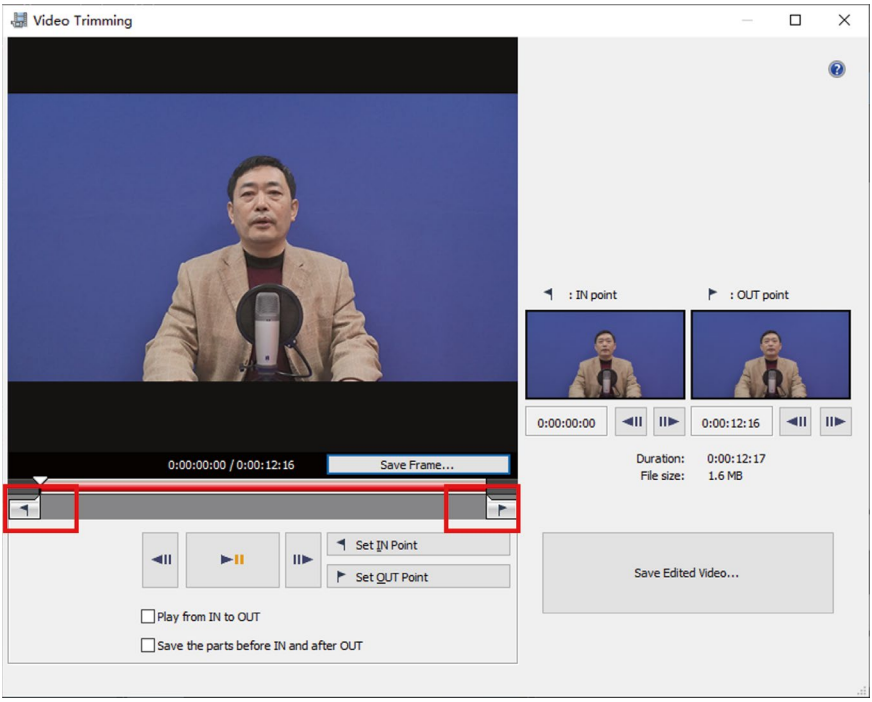


Fig. 16 Setting the IN and OUT points of files in PMB

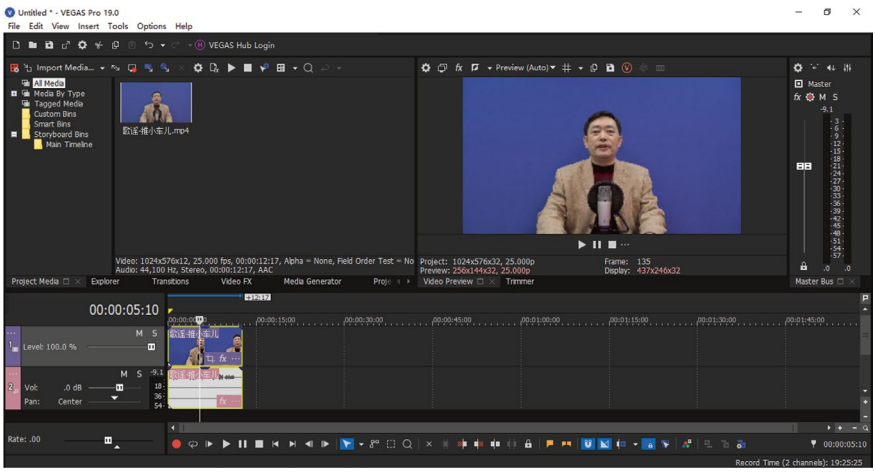


Fig. 17 Importing video files into Vegas

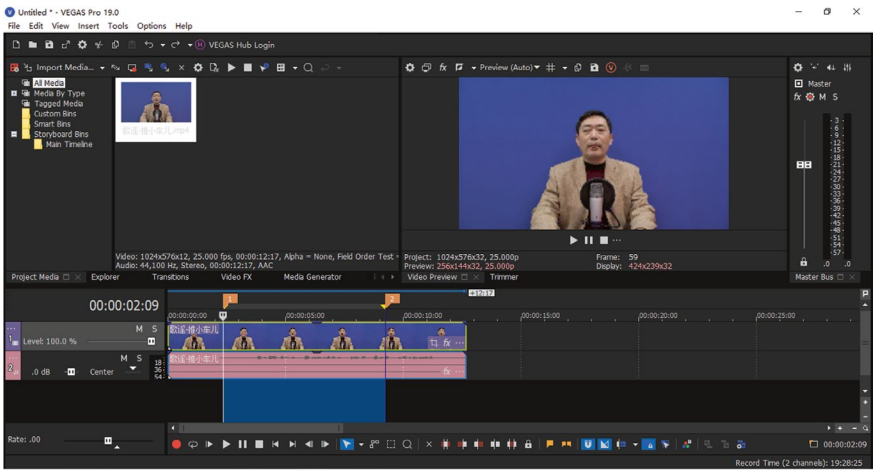


Fig. 18 Setting the IN and OUT points of the file in Vegas

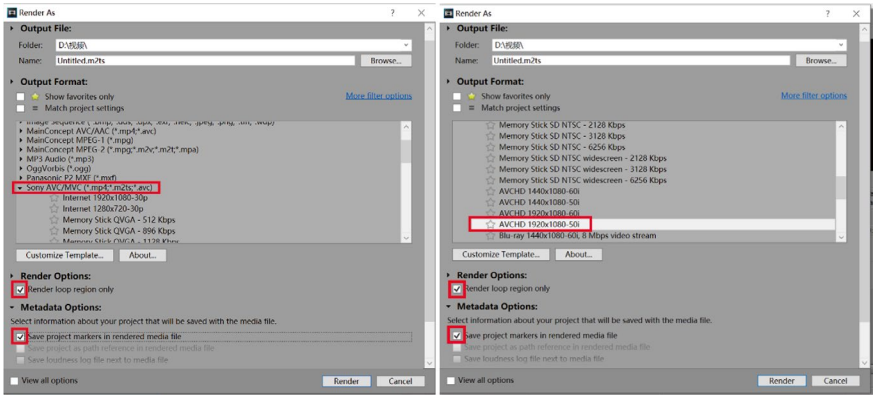


Fig. 19 Information of the file after splitting

(2) Combining files

If contents for a survey item are captured in multiple video files (e.g., shooting a long single cultural event that is saved in two or more files), these should be combined into one single file during collation.

Multiple files to be combined should be placed in the same folder.

Method 1: Using PMB

a. Launch PMB and click “Tools > Settings”. Click “Add Folder” on the left side of the dialog box. In the right window, check the folder where the files are located, and click “OK”. All files in the folder will appear in the PMB editor.

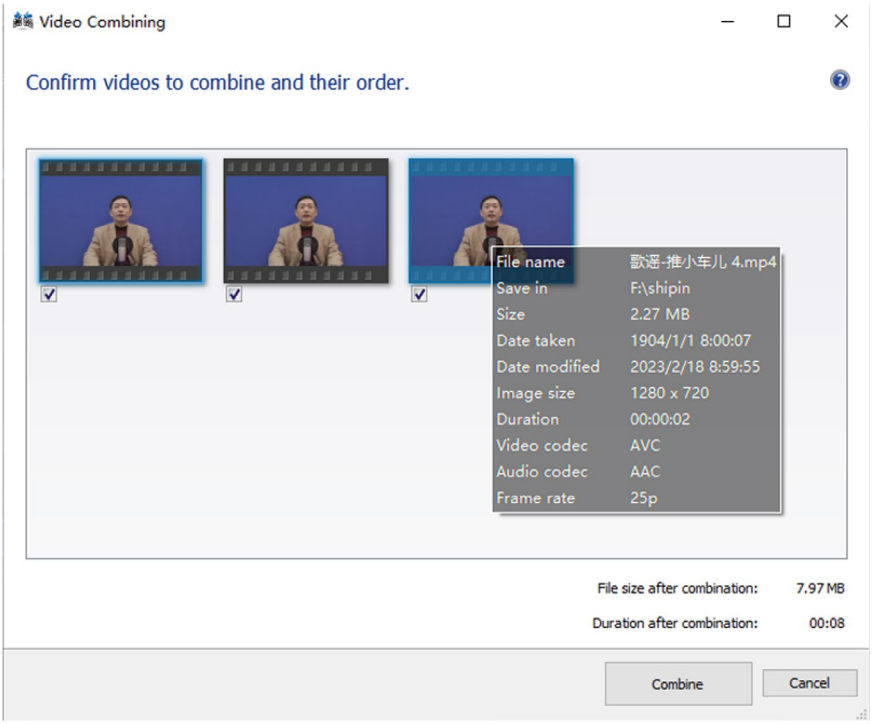


Fig. 20 Verifying information of the files and adjusting their order

Select one folder at a time by unchecking all the others.

b. Click "Index" at the top left and the "Details" button at the bottom right of the editor. Detailed information about the video files will appear.
c. Hold down the "Ctrl" key and click to select all the files to be combined, then click "Manipulate > Edit > Video Combining". Thumbnails of the selected files will appear in the "Video Combining" dialog box. When the mouse hovers over the thumbnail of a file, detailed information about it will be displayed. (See Fig. 20.)
d. Click and hold the left button to move and change the position of the thumbnails and adjust the order of the files. Adjust and verify the information, make sure there is a "✓" mark in the box under the thumbnail, and click "Combine".
e. The name of the new combined file as well as where it is saved will appear. Close and exit PMB.

The name of the new file will be similar to that of the first one in the original group. Note if there is a difference.

This new file is saved in the same folder where the first one in the original group was located.

Method 2: Using Vegas

a. Launch Vegas, and click "File (F)>Open (O)>Media (M)". In the "Open Media" dialog box, click to select the files to be combined, then click "Open". The files will appear in the Project Media window in the upper left corner.
b. In the Project Media window, click and hold the left mouse button, drag the files to the editing area below, and release the mouse. They will be arranged in the order in which they are imported. (See Fig. 21.)
c. Click the "|◀" button below the tracks, and press "Enter" on the keyboard. Preview the combined files in the Preview window to verify the information.
d. Click "File (F)>Render As (R)". In the "Render As" dialog box, "Save in" refers to the location of the video files after combining. Enter the names of the revised files in the box next to "File Name". In the box next to "Save as type", select "Sony AVC (*.mp4; *.m2ts; *.avc)". In the box next to "Template", select "AVCHD 1920 × 1080-50i". Finally, uncheck the box next to the "Render loop region only (L)" option ("✓" will disappear). (See Fig. 22.)
e. Click "Save" to start rendering, and then click "Close" to exit when rendering is completed. Repeat the above steps until the combining is completed, then close and exit Vegas. If a prompt in a dialog box appears asking whether to save the file, click "No".

II. Filling Out Templates

1. Overview of the templates

After the survey at each site is completed, the following templates (see Table 3) must be filled in and transcribed by the fieldworkers. All of them have been

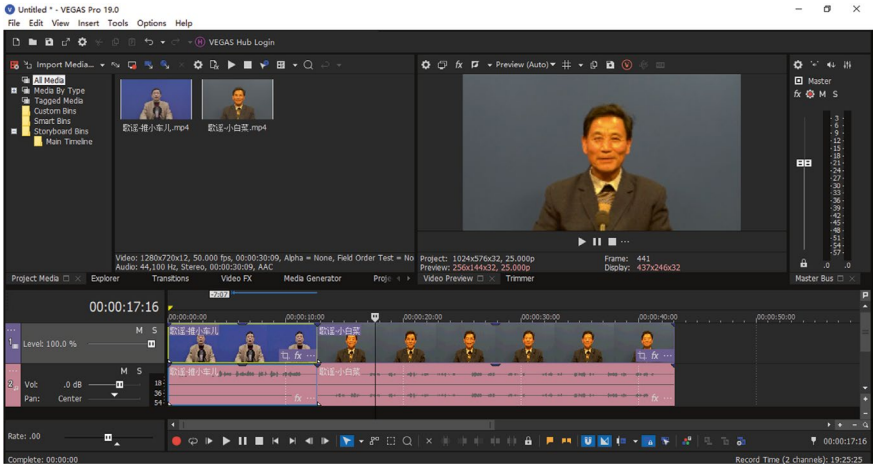


Fig. 21 Importing multiple video files to Vegas in sequential order

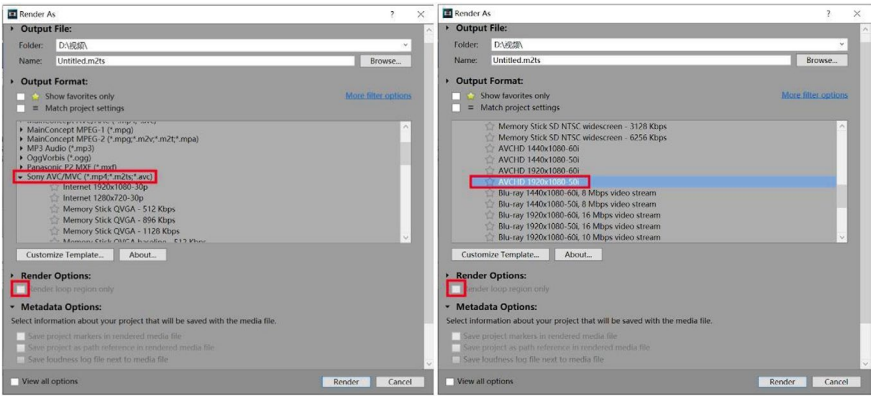


Fig. 22 Configuring the settings of the combined file

Table 3 Overview of the templates

	Excel files	Word files
0	1 Overview.xls (excluding pronunciation)	
	2 Pronunciation.xls (including tones, initials and finals)	1 Pronunciation description.doc
1–8, 9 (Sections 1 and 2)	3 Vocabulary.xls	
9 (Sections 3–6)		2 Sayings and proverbs.doc
		3 Ballads.doc
		4 Vocal folk art forms and opera.doc
		5 Storytelling in chant and narration.doc
Others	4 Photos and videos.xls	6 Table of orthography codes.doc
		7 Transcription and proofreading log.doc

compiled and provided by the research project team. No changes can be made to either content or formatting except for the samples. (The research project team has already locked cells with content that cannot be changed in Excel templates.)

2. Special considerations when filling out the templates

(1) Overview template

This includes 11 sub-forms: “Survey Site”, “Main Informants”, “Other Informants and Survey Participants (1)”, “Other Informants and Survey Participants (2)”, “Other Informants and Survey Participants (3)”, “Other Informants and

Survey Participants (4)", "Other Informants and Survey Participants (5)", "Other Informants and Survey Participants (6)", "Other Informants and Survey Participants (7)", "Fieldworkers", and "Survey Status".

The Overview template uses information from the Huaiji survey site in Guangdong province as an example. When filling out their own data, fieldworkers can either delete this information completely or edit it as needed. Some items (e.g., dialect types, distribution, population, usage, and changes) can be elaborated upon.

Numbers such as "1" and "2" in the first row should match the ordinal numbers of the survey items in the "Survey Item Overview". Note that some more complex items (such as names of survey sites) have been split into multiple columns.

If a survey item has no results (e.g., no minority groups living in the county), indicate "N/A".

(2) Pronunciation template

This includes three sub-forms: "Tones", "Initials", and "Finals".

To illustrate how to fill them in, these forms provide information about Nanning Cantonese. When filling out their own data, fieldworkers can either delete this information completely or edit it as needed.

The "Sample Characters" are filled in by "Categories" according to the origins of ancient Chinese, which include tones such as voiceless *Ping*, full voiced *Shang*, and partial voiced *Shang*; initials such as *Bang* initial, *Jing* initial, and *Jian* initial; and *She* finals (e.g., *Guo She*, *Shu* tone in *Xian She* finals, *Ru* tone in *Xian She* finals). The main "Category" of ancient origin is entered as "Sample Character 1" (e.g., the *Bang* initial in [p]), followed by lesser categories. All notes to sample characters (e.g., "后 (back)" in "前～(front～)") are omitted, and explained in the "Notes" column if necessary.

(3) Vocabulary template

Fill in survey results in the columns "Vocabulary 1", "Vocabulary 2", "Vocabulary 3", and "Notes", one row for each survey item. If a survey item has only one expression in the dialect, place it in the "Vocabulary 1" column (Vocabulary 1: Characters, and Vocabulary 1: Phonetics); if there are two or three expressions (i.e., "different words or phrases used to express the same concept", e.g., "茅屋 (maowu thatched hut)", also "茅铺 (maopu thatched hut)" and "铺 (pu hut)"), place them separately in the "Vocabulary 2" and "Vocabulary 3" columns. (To simplify the table, the "Vocabulary 3" column is blocked out, but can be unblocked if needed.) In the "Notes" column, enter dialect vocabulary notes or descriptions of local cultures.

In the template, each "subgroup" has nine items by default. If there are no expressions in the dialect, indicate "N/A" in column C (i.e., "Vocabulary 1: Characters"). Do not leave blanks. Always include brackets.

Notes

1. **If the recording log is filled in first before the templates, save time by copying and pasting from the log directly into the vocabulary template. Always check and adjust contents (e.g., written forms for "different words or phrases used to express the same concept").**
2. **If the visual guide is compiled first before the template is filled in, paste the guide text directly into relevant items in the "Notes" column.**

(4) Discourse template

The audio recordings in videos under "Discourse" (sayings and proverbs, ballads, vocal folk art forms and opera, storytelling in chant and narration) must be transcribed into Chinese characters, phonetic symbols, notes, or paraphrases in Putonghua. Start and end times of the transcription must be marked in the recording file.

At the end of each item, indicate the recording information, for example, (20110318 Tangxi, Informant: John Doe).

(5) Templates for photos and videos

Templates for "survey item photos" and edited "cultural video" files must be filled in. (Original cultural video files that do not need editing must be backed up, and these copies will count as the final files in the editing process. Their contents must be entered into the templates.) No need to complete templates for other photo or video materials. The following is an example of how to fill in templates for photo files.

a. Open "4 Photos and videos.xls".
b. Open the folder of photos to be processed.
c. Copy the original name of the photo file (with extensions), such as "20110315_0001.jpg", and paste into the "Original Name" column of "4 Photos and videos.xls". (Click twice or right-click on the file name to activate the "Rename" function, then copy and paste the name. To avoid errors, copy and paste rather than type.)
d. Manually fill in the "Survey Items", "Dialect Vocabulary", "Photo Number", "Shooting Time", and "Shooting Location" columns. If there are symbols such as "=" and "/" in the "Dialect Vocabulary" column, delete them all; for cases such as "#1", delete the number (but leave the "#" symbol). If there is only one photo for a survey item, enter "1" in the column of "Photo Number". In the "Shooting Time" column the date format must be year-month-day, e.g., "20110101". In the "Shooting Location" column, the names must be for villages or places at the same administrative level, e.g., "Shanhu" (no "village" designation) and "Jiufengyan".

The contents of the "Survey Items" and "Dialect Vocabulary" columns can also be copied from the "3 Vocabulary.xls" template. Make sure the copied contents correspond to the photo files.

e. No need to fill in the "Standard Name" and "Command" columns.

(6) For any dialect region which applies codes, submit a copy of the *Table of Orthography Codes* for that dialect (located in the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Templates\Word Files" folder).
(7) When filling out and transcribing the templates, complete the *Transcription and Proofreading Log* (located in the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Templates\Word Files" folder).

Refer to the samples in each template for more information.

III. File Naming

1. Template file names

All templates have been created in advance. Do not change their names.

2. Audio recording file names

Byly (Beiyu Luyin) software automatically generates audio recording file names to match those in the recording log (the same as those in the "Survey Items" column). This is a five-digit number with the survey item name, e.g., pronunciation: "01011东 (dong).wav", vocabulary: "11011房子 (house).wav", "94011 Nursery rhymes.wav". (The same file names must be used in Audacity, Adobe Audition, or any other recording software.)

3. Video recording file names

(1) Pronunciation videos

a. Keep the original name for the earliest pronunciation video file, adding in front numerical information for the starting and ending items and separating this from the original name by an underscore "_". For example, the original name "20110315105004.m2ts" must be changed to "11011 房子(house)-11939 住宅 (Residential homes) Addition 3_20110315105004.m2ts".
b. After editing, the name of the pronunciation video file must match the corresponding audio recording file (except for the extension). For example, use the "Survey Items" column in the recording log, e.g., "01011东 (dong).m2ts",

"11011房子 (house).m2ts", and "94011 Nursery rhymes.m2ts". (For original pronunciation video files that need no editing, their backups are treated as their edited version.)

(2) Cultural videos

a. Keep the name of the original file, e.g., "20110315105004.m2ts".
b. The naming standards and handling methods for cultural video files after editing are the same as for "Survey Item Photos". See "4 (1)" below. (Original cultural video files that do not need editing must be backed up, and these copies will count as the final files in the editing process.)
c. For other video files that do not fall into the above two categories, keep the original names, add notes in Chinese characters in front, and separate with an underscore "_", e.g., "文面女 (Dulong woman with facial tattoo)_20110315105004.m2ts".

4. Photo file names

(1) Survey item photos

To avoid confusion from renaming, first back up all original photos in another location.

a. Copy the "Rename.bat" file (located in the "Survey Site File Package\Software and Sample\Processing Software\Rename" folder) into the folder where photos to be processed are located.
b. Right-click the "Rename.bat" file. Select "Edit" to open, and delete all contents inside.
c. From the "4 Photos and videos.xls", identify contents from the "Command" column that correspond to the item to be renamed, and copy and paste them into the "Rename.bat" file.

For example:

ren 20110124_0133.JPG 11011房子 (house)_屋1_20110124岩下 (Yanxia)_20110124_0133.JPG.[8]

ren 20110126_0234.JPG 11012房子 (house)_老屋1_20110126岩下 (Yanxia)_20110126_0234.JPG.[9]

ren zp12-074b.JPG 11013房子 (house)_茅铺铺1_20010930珊瑚 (Shanhu)_zp12-074b.JPG.[10]

[8] "房子 (house)" is the group name, "屋" is one expression in the local dialect, and "岩下 (Yanxia)" is the name of the location where the dialect is spoken.

[9] "房子 (house)" is the group name, "老屋" is one expression in the local dialect, and "岩下 (Yanxia)" is the name of the location where the dialect is spoken.

[10] "房子 (house)" is the group name, "茅铺铺" is one expression in the local dialect, and "珊瑚 (Shanhu)" is the name of the location where the dialect is spoken.

Since several editing sessions may be required when renaming files, color the last line that has been processed in the "4 Photos and videos.xls" file as a reminder before saving and closing the file.

d. Save and close the "Rename.bat" file, and then double-click on it. The file to be renamed is now automatically converted to a "Standard Name", e.g., "11011房子 (house)_屋1_20110124岩下 (Yanxia)_20110124_0133.jpg".

(2) Photos of survey participants

Keep the original name, and add information in front such as "00001 John Doe" and "00002 Jane Doe", separated by an underscore ("_"). For example, the original name "20110315_0001.jpg" must be changed to "00001 John Doe_20110315_0001.jpg". For multiple photos of the same participant, add numerical information such as "00001 John Doe 1", "00001 John Doe 2", and "00001 John Doe 3". Sequencing the photos should be as follows: main informant, other informants, cultural survey items.

(3) Photos of the survey process

Keep the original name, and add information in front such as "00001 survey", "00002 survey", and "00003 survey", separated by an underscore "_". For example, the original name "20110315_0001.jpg" must be changed to "00001 survey_20110315_0001.jpg".

(4) For other photo files that do not fall into the above three categories retain their original names, add notes in Chinese characters in front separated by an underscore "_", e.g., "文面女 (Dulong woman with facial tattoo)_20110315_0001.jpg".

IV. Document Archiving

1. Fieldworkers must organize documents according to the table format (see Table 4) and place them appropriately. For existing folders and documents, no changes should be made to either placement or names. The "Corpus Collation" folder is located in the "Survey Site File Package\Electronic Documents to be Submitted" folder.
2. Do not change the placement of the template files.
3. Audio recording files

When using Byly (Beiyu Luyin) to record, all the audio files will be automatically saved in the standard location ("Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Audio Recordings"), provided there were no changes to the previous log location. If other recording software is used, the files must be manually placed into the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Audio Recordings" folder.

Table 4 Folder structure of "Corpus Collation"

Folder	Folder	Folder	File
Corpus Collation	Templates	Excel files	1 Overview.xls
			2 Pronunciation.xls
			3 Vocabulary.xls
			4 Photos and videos.xls
		Word files	1 Pronunciation description.doc
			2 Sayings and proverbs.doc
			3 Ballads.doc
			4 Vocal folk art forms and opera.doc
			5 Storytelling in chant and narration.doc
			6 Table of orthography codes.doc
			7 Transcription and proofreading log.doc
	Audio recordings	Pronunciation	01011东 (dong).wav …
		Vocabulary	11011房子 (house).wav …
		Discourse	94011 Nursery rhymes.wav …
	Video recordings	Original pronunciation videos	11011 房子 (house)-11939 住宅 (Residential homes) Addition 3_20110315105004.m2ts[6] …
		Edited pronunciation videos	11011 房子 (house).m2ts …
		Original cultural videos	20110315105004.m2ts …
		Edited cultural videos	13031 上梁 (Shangliang)_上梁 (Shangliang)1_20110124 岩下 (Yanxia)_20110315105004.m2ts[7] …
		Others	文面女 (Dulong woman with facial tattoo)_20110315105004.m2ts …
	Photos	Survey items	11011 房子 (house)_屋1_20110124 岩下 (Yanxia)_20110124_0133.jpg …
		Survey participants	00001 John Doe_20110315_0001.jpg …
		Survey process	00001 Survey_20110315_0001.jpg …
		Others	文面女 (Dulong woman with facial tattoo)_20110315_0001.jpg …

[6] "房子 (house)" is the group name and "住宅 (Residential homes)" is the subcategory name.

[7] The group name is "上梁 (Shangliang)" and the local dialect expression is also "上梁 (Shangliang)". The location where the dialect is spoken is 岩下 (Yanxia).

4. Video files are saved to the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Video Recordings" folder.

(1) Place the original pronunciation video files in the "Original pronunciation videos" folder.
(2) Place the edited pronunciation video files in the "Edited pronunciation videos" folder. (For those that do not need editing, their backups are treated as their edited version.)
(3) Place the original cultural video files into the "Original cultural videos" folder.
(4) Their edited versions go into the "Edited cultural videos" folder. (Original cultural video files that do not need editing must be backed up, and these copies will count as the final files in the editing process.)

5. Save photo files in the corresponding folders under the "Survey Site File Package\Electronic Documents to be Submitted\Corpus Collation\Photos" folder.

V. Proofreading

1. All materials should be manually proofread at least twice, with the focus on the transcribed Chinese characters and phonetic symbols, audio and video file quality, file names and locations.
2. The first round of proofreading should be conducted by the survey team members themselves, the second by the survey team leader. At this stage, the proofreader must complete the *Transcription and Proofreading Log*.
3. Errors and omissions must be identified, corrected, or filled in, a timely manner. If necessary, the survey should be re-done altogether.
4. The survey team leader is responsible for the quality of all the data.

Part 3: Standards for the Visual Guide

I. Overview

1. The visual guide contains about 600 photos and 100,000 characters of text. A sample can be found in the folder "Survey Site File Package\Software and Sample\Sample\Visual Guide Compilation".
2. It is divided into nine major parts: houses and buildings; household items; clothing and accessories; food; agriculture, crafts, commerce and other professions; daily activities; weddings, births, and funerals; festivals; and vocal performances.

The opening "Introduction" contains three sections that briefly describe the survey sites, their dialects, and notes on them. This is all based on the samples provided by the research project team.

There is an "Index" at the back, which contains all entries from Parts 1 to 8, arranged in alphabetical order.[11] If the first character of an item is not in the *Modern Chinese Dictionary*, put a box ("□") before it and place it in the "Others" category at the end of the index. This character must be phonetically annotated following the order of the sound chart in section two of the "Introduction". If an entry or a photo name has a box ("□") before it, give the full sound annotation after it. Each entry must have a page number placed to the right.

3. The order of entries should reflect both the systematic organization and the logical relationships between the items.

If an item could be placed into more than one category, prioritize the cultural aspect first. For example, "rice cake" can be classified as both a regular food and also as a special food for festivals. In this case, place it in the category of festivals. To make reading the data easier, place closely related entries together. For example, "plow" can be placed after "plowing" in the agricultural activity category (instead of in the one for agricultural tools).

4. Generally speaking, 1000 characters are the limit for the overview at the beginning of each chapter (category).

II. Photos, Vocabulary, and Text

1. Except for the chapter on "Vocal Performances" (see "III-6"), all items in other chapters include three components, namely "photos" (survey photos), "vocabulary" (dialect term), and "text" (descriptive text). The "photo" comes first, followed by the dialect term, and finally the text. There can be no "photos without vocabulary", "vocabulary without photos", or "photos and vocabulary without text".
2. There may be one dialect term with several photos, e.g., a full versus close-up shot, a static versus dynamic photo, but generally limit them to no more than two. In most cases, it is "one photo per term".

At times, the same dialect term is used for several objects and activities that are very different and thus have different photos. These can be treated as separate items. If they appear in the same section (subcategory), add "(Alternative 1)" and "(Alternative 2)" after the dialect term. If they appear in different sections, follow the regular rules.

[11] Specifically, it is ordered according to the Chinese alphabets of Pinyin in Putonghua for the first character of the lexical item in the dialect.

3. On the other hand, where one photo is accompanied by several dialect terms only use them all if absolutely necessary. Placement of the dialect terms is as follows: "艾[ɛ^{341}]丨水菖蒲[ɕiei^{52}tɕ^{h}io^{24}bu^{0}][12]". (See the visual guide samples document in Chapter 8, photo # 49.)

III. Photos

1. All photos in Word files need to be compressed (right-click the photo>photo format>compress>all photos in the document>OK) and set to a length of 8 cm (landscape image) or 5.5 cm (portrait image), leaving the width to be automatically adjusted (right-click the photo>photo format>size>in the "Length" box, enter the absolute value of 8 or 5.5, do not manually enter any absolute value in the "Width" box; in the lower left corner of the dialog box, check the small boxes beside "Lock aspect ratio (A)" and "Relative to original photo size (R)">OK).

If necessary, the photo can be cropped and further edited (e.g., for a landscape image: right-click the photo>Open With>Microsoft Office Picture Manager>Edit the photo>Crop>Aspect Ratio 10 × 15>OK>Save).

Photos in Word files must be exactly the same as in the Photo Files folder.

2. Left-justify photos
3. At the bottom right of the photo, leave a 6-point single blank space, then add 6-point text about the photo number and shooting location, e.g., "8-5◆岩下 (Yanxia)". The number before the dash indicates the category, and the one after is the photo number within this category. The shooting location is generally a village name (no need to add "village"). When the survey site is a city, use the street name or a more specific name. If the shooting location is unknown, write "location unknown" (in very rare cases).

If the photo is taken by the author of the visual guide (including research project team members), no acknowledgement is needed. If taken by others, the name of the photographer or of the photo provider is placed in brackets "()" after the shooting location, e.g., "8-10◆台岩 (Taiyan) (taken by Fu Huijun)".

The time of shooting may be noted in the "Introduction III Introductory Notes 2: Photo Source".

4. To assist the graphic designer, photos must be divided into three categories: A, B, and C. Only those in Categories A and B need to be labeled. (The rest are in Category C.)

[12] These are plant names, with "艾" meaning *Artemisia argyi* and "水菖蒲" meaning *Acorus calamus*.

Categories A and B photos must have meaningful, typical, and attractive images. Category A photos can be full page ones or span two pages, Category B photos only half a page. The maximum number of Category A photos is 10. In principle, each chapter has only one Category A photo, with a maximum of two if necessary. For example, in the "Weddings, Births, and Funerals" chapter, there can be one Category A photo for the wedding and one for the funeral. If no Category A photo is available (e.g., in the "Household Items", "Clothing and Accessories", and "Food" chapters), then omit photos altogether. The maximum number of Category B photos is 40, or about five per chapter.

Categories A and B photos are labeled by adding "[Category A photo]" and "[Category B photo]" (in 5-point red text) after the location name at the bottom right of the photo, e.g., "1-38◆ 台岩 (Taiyan) [Category A photo]". Category C photos are not labeled.

5. In principle, do not merge photos.
6. Where necessary, use diagrams to illustrate cultural phenomena related to the dialect.

IV. Vocabulary

Left-justify dialect vocabulary. Use bold type. Highlight text in red lettering in Word files. If different words or phrases are used to express the same concept (e.g., one item with multiple expressions), or are pronounced differently, use the most common one as the item name, and annotate it with the most used pronunciation. Add other expressions and pronunciations in the descriptive text.

V. Descriptive Text

1. The descriptive text must relate directly to the photo or vocabulary item, and be clear, concise, and to the point. Generally speaking, do not include extended meanings or analyses. Important or very special items may have a more detailed description, and the ordinary ones (e.g., coffee table) only need a very brief one. Descriptive text should not exceed three lines per item.

Note: If the template is filled in first before compiling the visual guide, refer to the template "Notes" column when drafting the descriptive text.

2. Wording in the descriptive text: a small number of other dialect words can be used but must relate directly to the specific item. Always limit their number.

   If dialect words in the descriptive text are also the name of the specific survey item (i.e., dialect term itself), use quotation marks but no phonetic

symbols. Other dialect words in the text (including in other survey items) are also placed in quotation marks, while phonetic symbols (after the quotation marks) are used only for their first occurrence within a section (or subcategory), and notes can be added (after the square brackets) if needed. Later appearances only need quotation marks without phonetic symbols or notes. The same rules apply in other sections.

To make reading easier, quotation marks are only used for the first appearance within the same section of those words that are the same as or similar to those in Putonghua, after that none are needed. Dialect phrases and sentences in the descriptive text are generally not annotated with phonetic symbols. However, a dialect word marked as a box ("□") requires phonetic symbols at each occurrence.

Explanatory notes on the dialect word must be written as parenthetical citations in 6-point Song font (only applicable to dialect words). Do not use footnotes or endnotes.

3. If different words or phrases are used to express the same concept or are pronounced differently, clarify this at the beginning of the text. If necessary, point out the root character, special pronunciation, lexical composition, meaning, and usage.

   If there are multiple objects in a photo, the text must identify the survey item.

   When referring to other photos, use the format "(see Figure 2-5)" for direct references, and "(refer to Figure 8-12)" for indirect ones. Do not write "See Chapter X, Section X".

VI. Chapter on "Vocal Performances"

1. This chapter should contain only the dialect aspects of these cultural phenomena. No photos included.
2. The dialect material is broken up into sentences based on the punctuation marks at the end of each sentence, e.g., "。". Long sentences can also be broken up based on the punctuation marks in the middle, e.g., "". Each sentence must be transcribed into Chinese characters first, and then annotated with phonetic symbols. If explanatory notes are needed, add them at the end of the sentence using 6-point Song font (e.g., "肚饥 (duji): 饿 (hungry)"). For line breaks, create a hanging indent of one character.
3. Descriptive texts must accompany entries for "Complimentary and Taboo Language", "Swear Words", "Sayings and Proverbs", "Ballads", and "Vocal Folk Art Forms and Opera". These texts must briefly describe the item and its associated culture. Use 5-point Song font.
4. For "Complimentary Language", generally use the original wording, e.g., in the case of "传袋 (chuandai)" (a homophone for "传代", having a son to carry on the family name), use "传袋", which are the original dialect characters, instead of the commonly used "传代". For "Taboo Language", generally use euphemisms for the item, e.g., "果子 (guozi)" (a euphemism for "中草药 Chinese herbal medicine"), instead of "中草药".

5. If there is a metaphor, add a "Metaphor" section after "Complimentary and Taboo Language".
6. For "Sayings and Proverbs", if a two-part allegorical saying involves homophonic words, use 6-point Song font to annotate after the phonetic symbol (e.g., "舅 (jiu, uncle)" is a homophone of "旧 (jiu, old)").
7. For "Ballads" and "Vocal Folk Art Forms and Opera", if the tone in singing is different from speaking, only record initials and finals, without the tones. Leave a space between syllables.
8. For "Stories", there are often a number of phonetic alterations in the language flow (syncope, phonetic reduction, coalescence, etc.). Transcribe the actual pronunciation of the informant with phonetic symbols. At the end of each story, add paraphrases in Putonghua in 5-point GB2312 font.

VII. Font and Layout

1. Work in a Word 97-2003 compatible document, A4 page size, upper and lower margins of 2.54 cm, and left and right margins of 3.17 cm (i.e., the default settings). The minimum line spacing must be 16 points, and the page number alignment "centered". In the "Format > Paragraph > Chinese version", check the box "Allow Western languages to switch lines in the middle of words".
2. Under normal circumstances, use 5-point Song font for Chinese characters, 5-point Times New Roman for Arabic numerals, 5-point IpaPanNew font for phonetic symbols, with 5-point Song in superscript for tone pitch, 5-point Song font for the "[ ]" symbol around phonetic symbols. Use 6-point Song font for notes in small print.
3. Refer to "I-8" and "I-9" for standards of phonetic annotations and orthography. Do not use the symbol [Ø] to annotate zero initials.
4. Start each chapter (category) on a new page, and also start each section (subcategory) within the chapter on a new page. The title for each chapter is to be written in 3-point boldface text in Song font, with 3 blank line spaces in 5-point size above and below. Each section title should be in 4-point boldface text in Song font, with 2 blank line spaces in 5-point size above and below.
5. Leave a blank line space between entries. No blank line spaces between photos and dialect entries. If a vocabulary item includes multiple photos, leave a blank line space between them.

VIII. Naming Files and Archiving Documents

1. After the visual guide is completed, all documents must be organized and their names standardized according to the table (see Table 5). The "Visual Guide Compilation" folder is located in the "Survey Site File Package\Electronic Documents to be Submitted" folder.

Table 5 Folder structure of "Visual Guide Compilation"

Folder	Folder	Folder	File
Visual Guide Compilation	Word files		1 房屋建筑 (houses and buildings).doc …
	PDF files		1 房屋建筑 (houses and buildings).pdf …
	Photo files	1 房屋建筑 (houses and buildings) …	1-9 中心间 (middle room) 20110808_3607.jpg …

2. Each chapter is saved in both Word and PDF versions. Put all Word files in one folder and all PDF files in another. Use "chapter number + chapter title" as the file name format, e.g., "1 房屋建筑 (houses and buildings).doc" and "1 房屋建筑 (houses and buildings).pdf". Store Word files in the "Survey Site File Package\Electronic Documents to be Submitted\Visual Guide Compilation\Word Files" folder. Store PDF files in the "Survey Site File Package\Electronic Documents to be Submitted\Visual Guide Compilation\PDF Files" folder.
3. Place photo files in their corresponding folders: "Survey Site File Package\Electronic Documents to be Submitted\Visual Guide Compilation\Photo Files". Name photo files by adding the photo number and dialect term in front of its original name, e.g., "1-9 中心间 (middle room) 20110808_3607.jpg". In the case of one dialect term with multiple photos, add "(1)" and "(2)" after the dialect term to distinguish them, e.g., "1-3 老屋 (1) DSC08176.jpg" and "1-4 老屋 (2) IMG_10233.jpg".

Part 4: Standards for Audio and Video Processing

This Part describes how to add subtitles (including phonetic symbols) to the audio and video materials. Other editing methods such as adding photos and audio-visual effects are in another document.

At this point, the pronunciation videos mostly need subtitles; cultural videos do not need them. The audio and video processing samples are in the "Survey Site File Package\Software and Samples\Samples\Audio and Video Processing" folder.

I. Preparation

1. Installing the following software programs (located in the "Survey Site File Package\Software and Samples\Processing Software\Video Processing" folder):

(1) ELAN

ELAN is used for transcribing and annotating audio and video files, as well as creating subtitle files.

(2) FinalCode

FinalCode is intended to enhance compatibility for video and audio file formats. Be sure to remove the tick in the "Player and Tools" check box during installation. (See Fig. 23.)

(3) AVS Audio Converter

AVS Audio Converter is used to extract audio from video files. During installation, remove the tick in the "RealMedia format pack" and "MIDI format pack" check boxes, and before the installation is completed remove the tick in the "Launch AVS Audio Converter" check box. Note the limits to use of this software.

(4) Notepad++

Notepad++ is used to convert the text encoding of subtitle files to avoid garbled code when playing back with commonly used software.

(5) QQ Player, Baofeng Player, and other commonly used software

These are used to play videos with external subtitles.

2. Setting preferences in ELAN

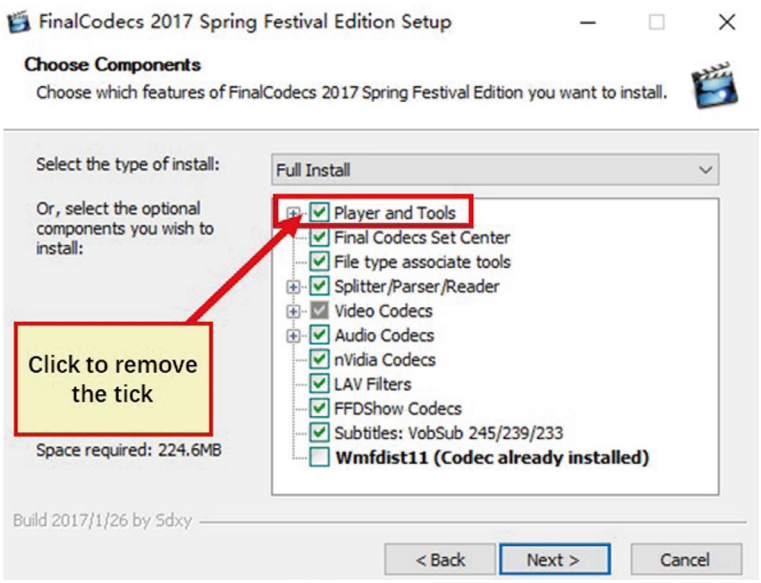


Fig. 23 Removing the tick in the "Player and Tools" check box

(1) Launch ELAN, and click "Edit > Preferences > Edit Preferences" in the menu bar. (See Fig. 24.)
(2) Click the fourth item down "Platform/OS" in the list on the left, then select the "Use Windows Look and Feel" check box in "Edit Preferences". Click "Apply" to confirm. (See Fig. 25.)
(3) Click "Edit > Software Settings > Preferences" in the menu bar to set other options. Click the sixth item down, "View Options", in the list on the left. In the "Edit Preferences" area, set the "Number of Subtitle viewers" field to 1 (or to another number as needed). Select the check box next to "Reduced Tier Height", and finally click "Apply". (See Fig. 26.)

3. Creating shortcut keys

Using shortcut keys can greatly improve efficiency in ELAN. Click "Edit > Software Settings > Edit Shortcut" in the menu bar to view and create various shortcut keys. (See Fig. 27.)

ELAN can create shortcut keys for different modes such as annotation, transcription, and segmentation. It can also create generic shortcut keys that apply to all modes. If there are no keyboard shortcut conflicts between ELAN and the operating system or other software programs, customize shortcut keys according

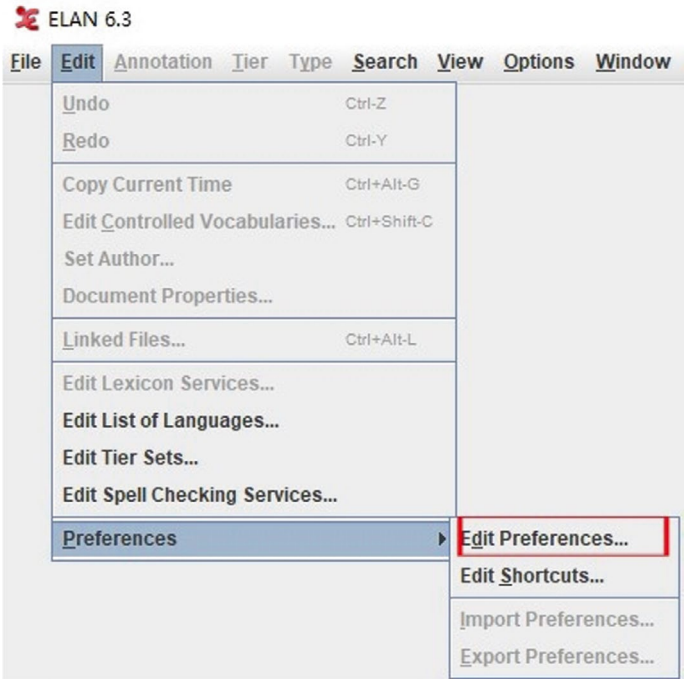


Fig. 24 Setting preferences in ELAN

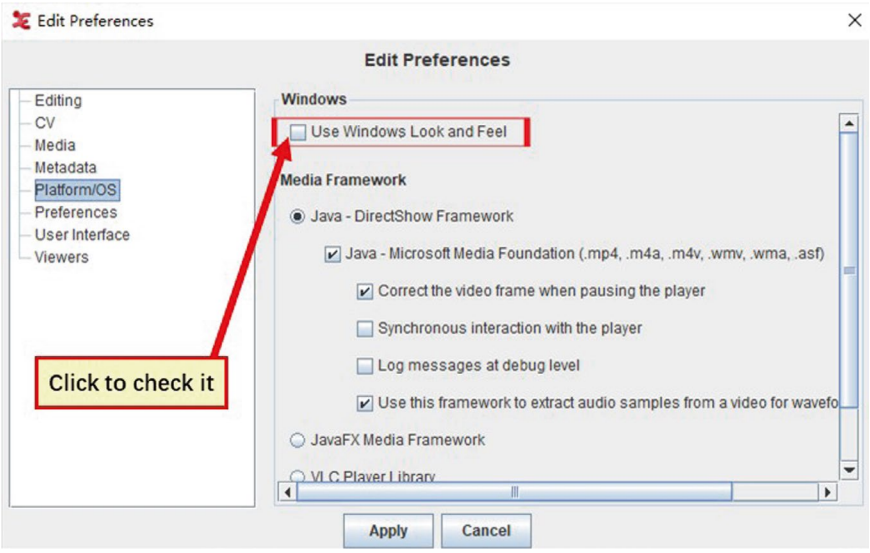


Fig. 25 Checking the "Use Windows Look and Feel" box

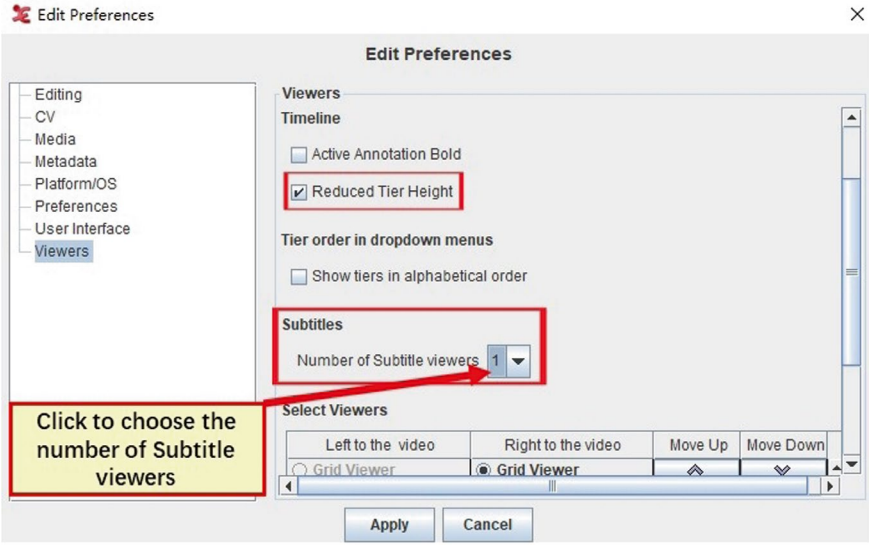


Fig. 26 Selecting the number of subtitle viewers and setting tier height

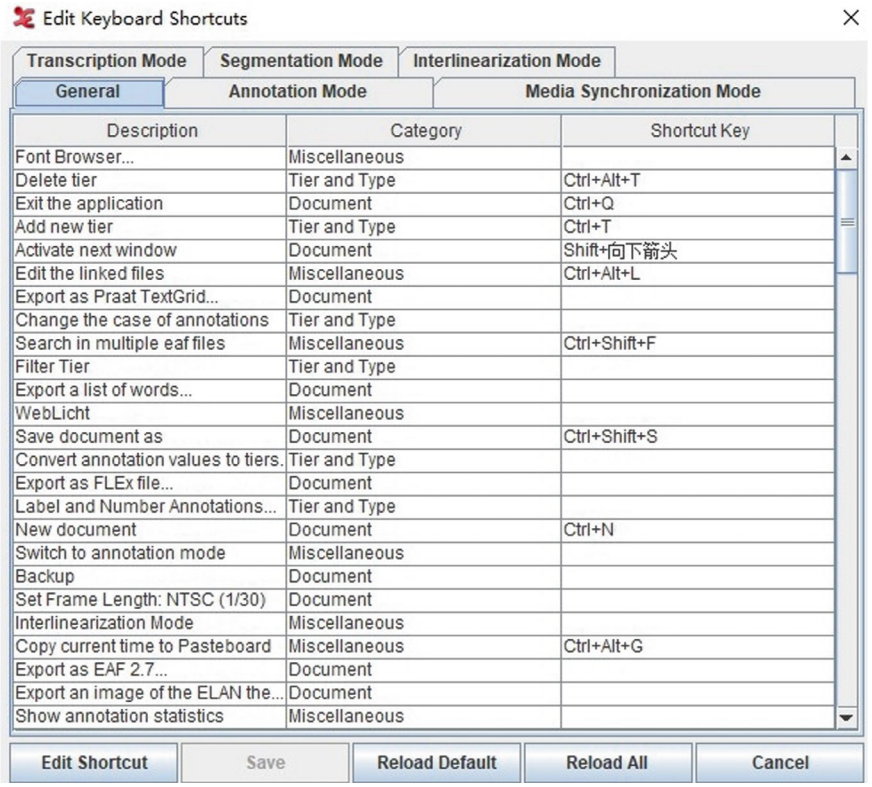


Fig. 27 Editing keyboard shortcuts

to the characteristics of the computer keyboard and personal preference. For example, “Segmentation Key” and “Play/Pause” in segmentation mode: click the “Segmentation Mode” tab and select the “Segmentation Key” line. Then click “Edit Shortcut”. After the dialog box pops up, press the “Ctrl” and “1” keys on the keyboard at the same time, and click “Apply”. This will set the keyboard shortcut of “Segmentation Key” to “Ctrl + 1”. Use the same method to create a shortcut for “Play/Pause”. Click “Save” to complete the task.

II. Transcribing and Annotating Video Materials

1. Creating a new folder with the same name as the video file to be transcribed and annotated.

Copy the file into this folder.

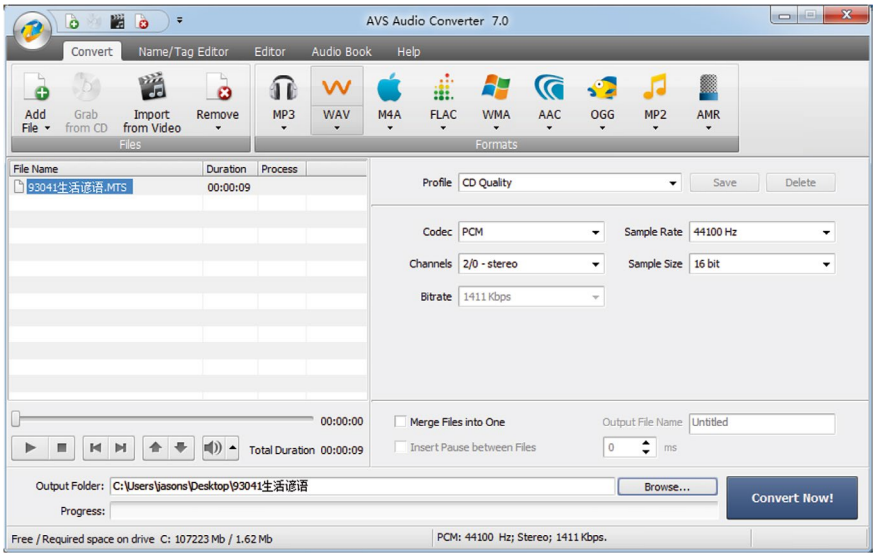


Fig. 28 Extracting audio from a video file

2. Extracting audio from video files

Launch AVS Audio Converter. Click and hold the video file you wish to extract audio from, and drag it into the left pane of AVS Audio Converter. Click "WAV" and select "CD Quality". The audio output will be extracted and put in the same folder as the video file. Click "Convert Now!" at the bottom right corner, and the audio file in *.wav format will be extracted from the video file. (See Fig. 28.) It should have the same name as the video file (except for the file extension).

3. Importing the audio file into ELAN and saving it as an *.eaf file

Launch ELAN. Click "File>New" in the menu bar. In the pop-up dialog box, find and open the folder where the video and audio files are located. Select the audio file, then click the >> icon, and click "OK" to import the audio file into ELAN. (See Fig. 29.)

Click "File>Save" in the menu bar. Find and open the folder where the audio file is located, enter the same file name as this audio file (except for the file extension), and click "Save". (See Fig. 30.)

Always use the same name as the audio and video files and save as an *.eaf file. Otherwise, the subtitle file might not be automatically recognized in the player.

4. Setting the automatic backup time

Click "File>Automatic Backup" in the menu bar, and select "5 Minutes". (See Fig. 31.)

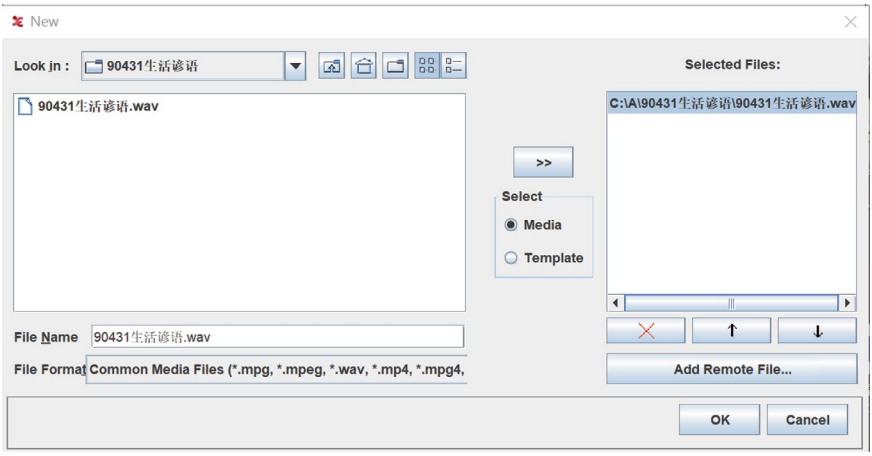


Fig. 29 Importing audio files into ELAN

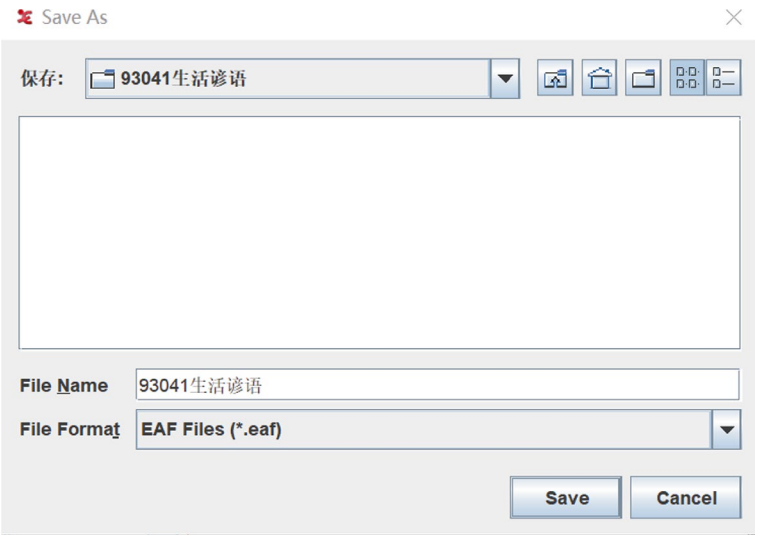


Fig. 30 Using the same name as the audio and video files and saving as an *.eaf file

5. Adding linguistic types

Click “Options>Annotation mode” in the menu bar. Under “Annotation Mode”, click “Type>Add New Linguistic Type” in the menu bar. In the “Add” tab in the lower part of the “Add Type” dialog box, enter “Dialect” in the “Type Name” field. Then click “Add”, and the new “Dialect” type will appear in the “Current Types” table above. Then enter “Ipa” in the “Type Name” field. Select “Symbolic

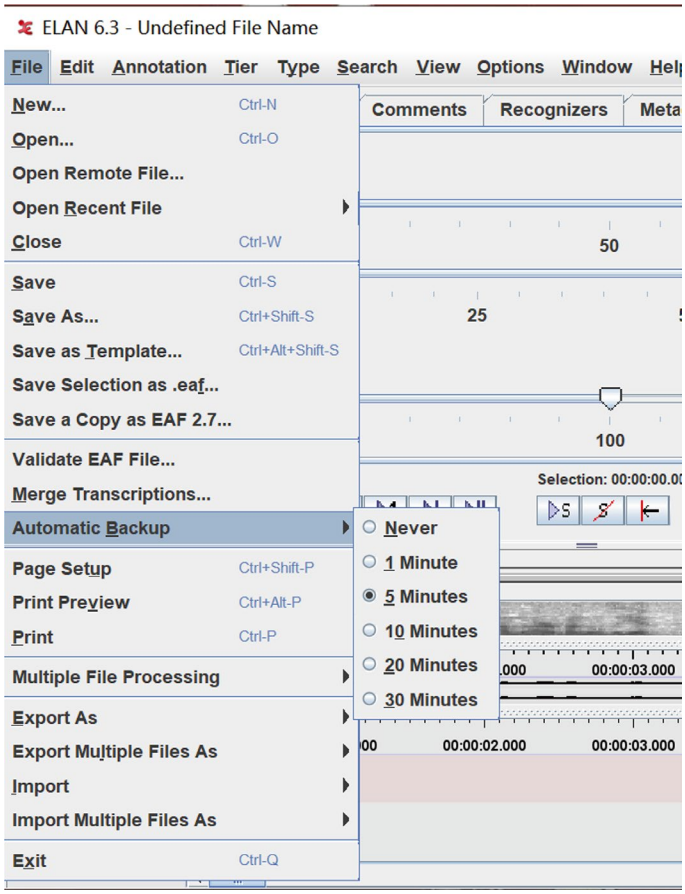


Fig. 31 Setting the automatic backup time

Association" for the stereotype, and click "Add". Enter "Pth" in the "Type Name" field again, and select "Symbolic Association" for the stereotype. Click "Add" and then click "Close" once all three linguistic types have been added. (See Fig. 32.)

6. Changing tier attributes

Right-click "Default" on the bottom left side of the audio waveform, and select "Change Tier Attributes". In the "Change" tab below the "Change Tier Attributes" dialog box, change the "Tier Name" to "Dialect", and select "Dialect" for "Tier Type". Click "More Options", set "Tier Font" to "Song" in the pop-up dialog box and click "Apply". Finally, click "Change" to exit. (See Fig. 33.)

7. Creating segmentation keystrokes in the segmentation mode

Click "Options" and "Segmentation Mode" in the menu bar, and set "Segmentation Mode" to "One keystroke per annotation (adjacent annotation)".

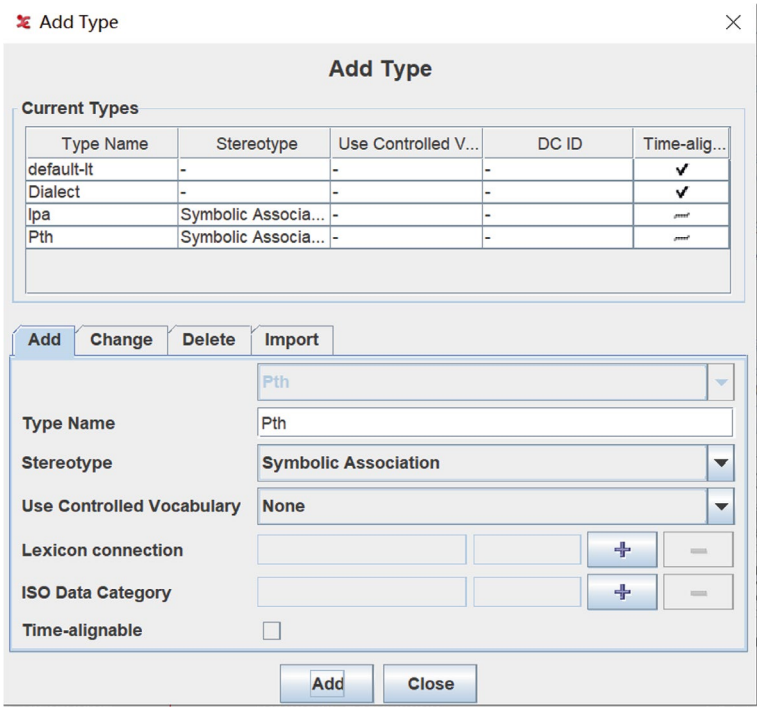


Fig. 32 Adding linguistic types

Click "⏮" (or use the default keyboard shortcut "Ctrl+B") to move the cursor to the start of the audio waveform, and press "Ctrl+1" (the keyboard shortcut for "Segmentation"). Identify the start of the first annotation, then click "▶" (or use the keyboard shortcut "Ctrl+2") to play the recording. After the first natural pause, click "⏸" (or use the keyboard shortcut "Ctrl+2") to pause, and then press "Ctrl+1" to connect with the starting keystroke to confirm the first annotation. Repeat these steps until all segmentation keystrokes are created. (See Fig. 34.)

If errors occur in the segmentation of any annotation, move the cursor to this annotation so that it appears as a green flat "H" shape. Press the "Del" key to delete it.

In the segmentation mode, if the shortcut key for "Segmentation" is also the "Enter" key, segmentation is often difficult. Change the shortcut key from "Enter" to another key.

8. Adding a phonetic tier and a Putonghua tier in the annotation mode

Click "Options>Annotation Mode" in the menu bar to switch to the annotation mode. Click "Tier>Copy Tier" in the menu bar. In the "Copy Tier" dialogue box, click "Dialect>Next". Click "Dialect" again to make it the parent tier of the

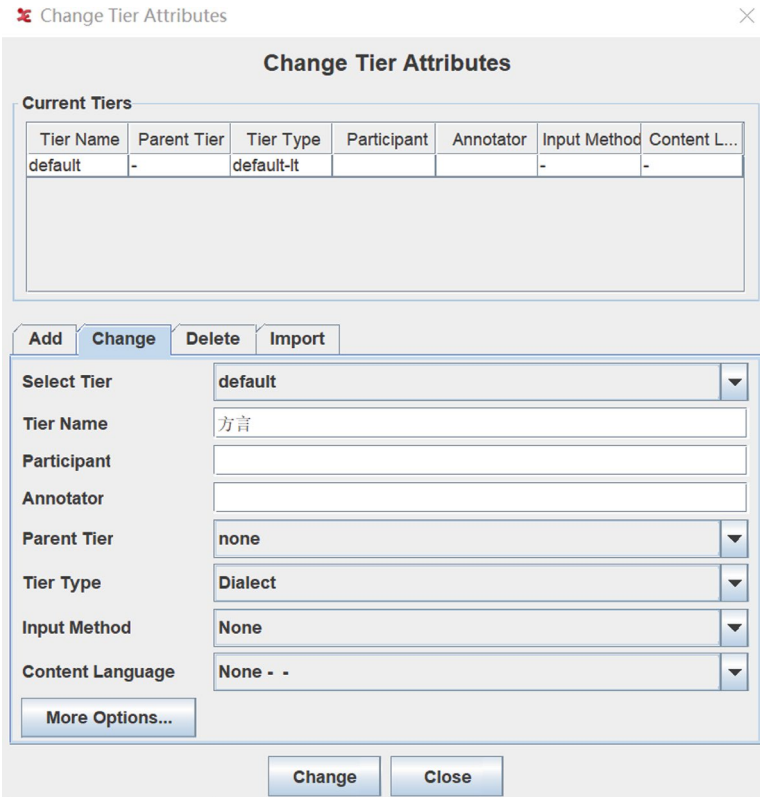


Fig. 33 Changing tier attributes

phonetic tier. (See Fig. 35.) Click "Next", and then set "Tier Type" to "Ipa". Click "Finish" to finish the task.

At this point, two tiers appear below the waveform: one is "Dialect" and the other is "Dialect-CP". Right-click on "Dialect-CP" and select "Change Tier Attributes". Then change the tier name from "Dialect-CP" to "International Phonetic Alphabet". Click "More Options". In the pop-up dialog box, set the "Tier Font" field to "IpaPanNew" and click "Apply". Finally click "Change" and exit the dialogue box.

Repeat the above steps to create a third tier, "Putonghua". The parent tier must be set to "Dialect", "Tier Type" to "Pth", and tier font to "Song". The finished result will appear as in Fig. 36.

9. Transcribing in the transcription mode

Click "Options > Transcription Mode" in the menu bar. In the pop-up dialogue box, select "18" for "Font size", "3" for "Number of columns", and "Dialect",

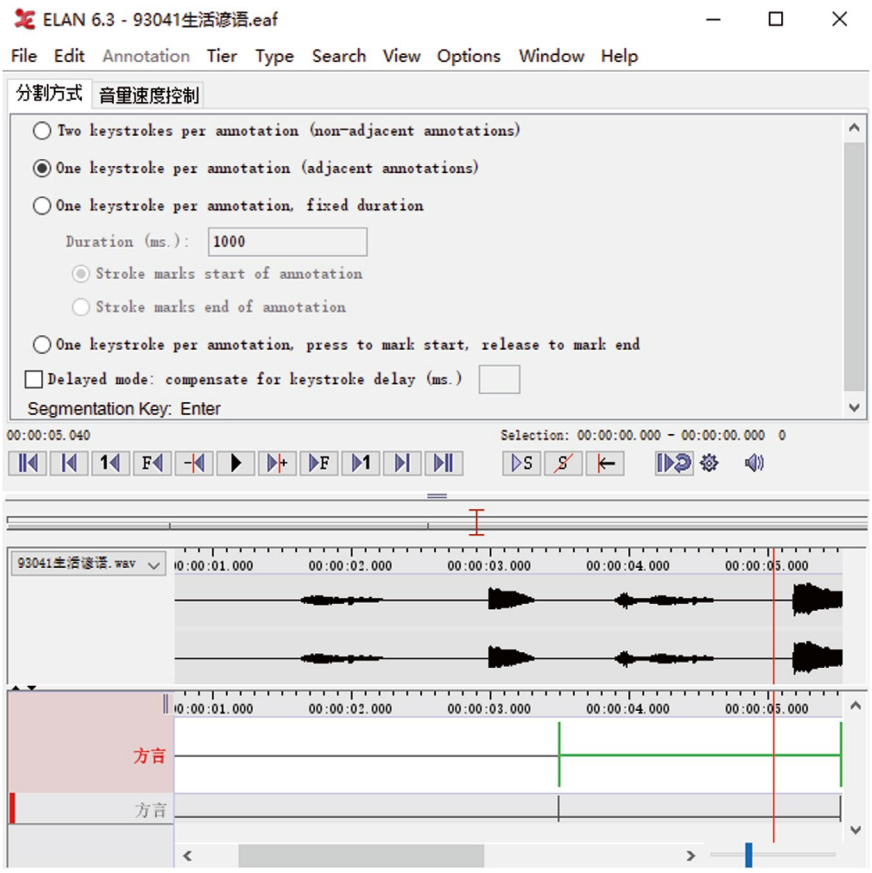


Fig. 34 Creating segmentation keystrokes in the segmentation mode

"Ipa", and "Pth" in turn for "Select type for column". Click "Apply". (See Fig. 37.)

To transcribe an audio file, click the first space in the "Dialect" column. ELAN will play the first sentence so that the transcriber can write it down. When this is finished, press "Enter" to move to the next sentence. Repeat the process until the last sentence is transcribed. When the whole transcription is finished, follow the same steps to transcribe it first in phonetic symbols (use IpaPanNew font) and then in Putonghua. (See Fig. 38.)

These are the basic steps for transcribing and annotating video materials. Some flexibility is possible to improve efficiency and reduce errors during the process. For example, template files can be copied to avoid repeating tier types and names. These techniques and methods are included in a separate document.

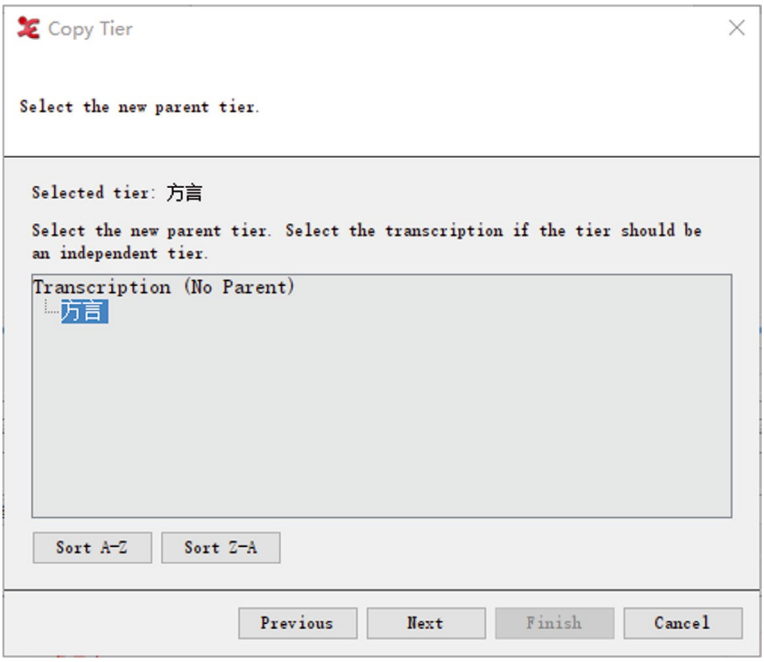


Fig. 35 Selecting the parent tier

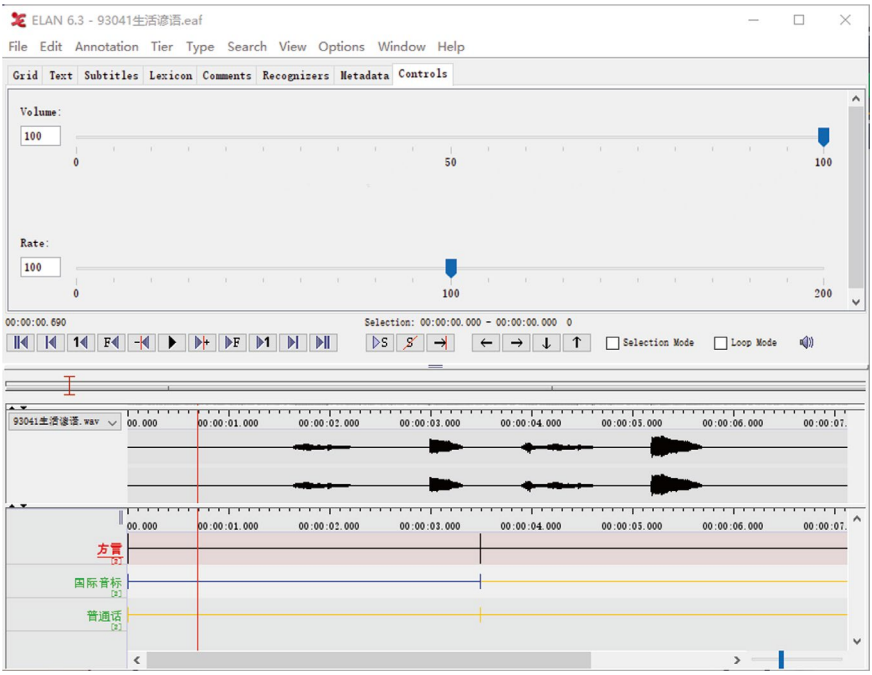


Fig. 36 Creating dialect, phonetic, and Putonghua tiers

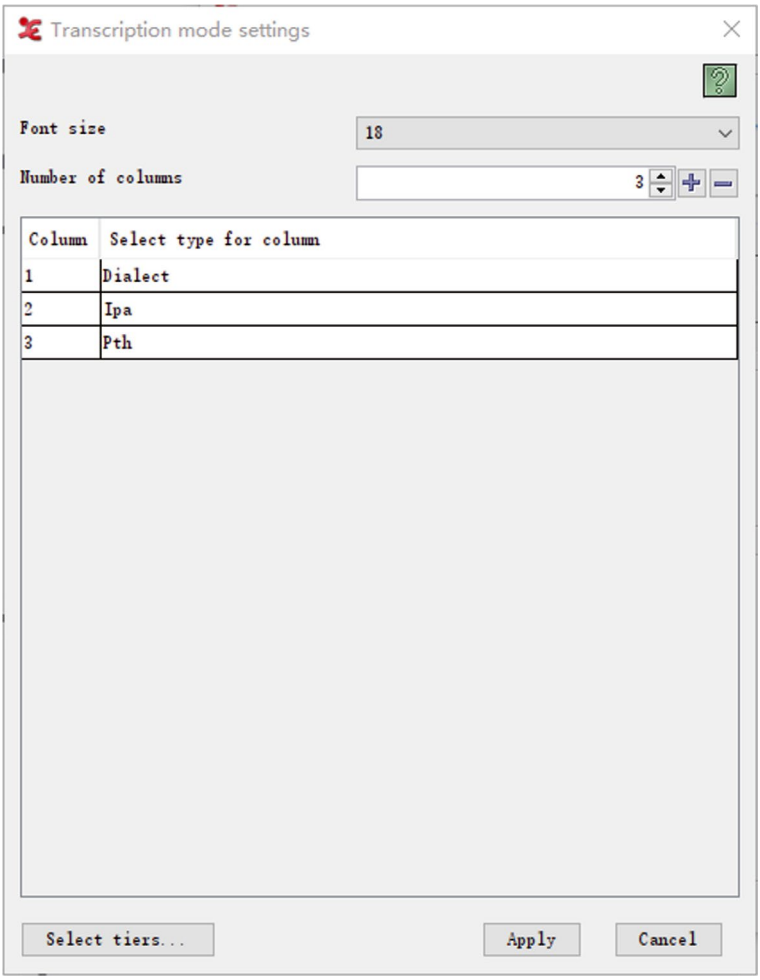


Fig. 37 Transcription mode settings

III. Creating Files for Subtitles

1. Exporting the subtitle file

After transcription and annotation, click "File>Export as>Subtitle Text>OK" in the menu bar. Select "*.srt" for "File Format" and "UTF-8" for "Encoding". Save the file to the folder where the video, audio, and *.eaf files are located, giving it the same name. (See Fig. 39.)

If needed, also export the subtitle file in *.lrc format by following the same steps as above, but set the "File Format" field to "*.lrc".

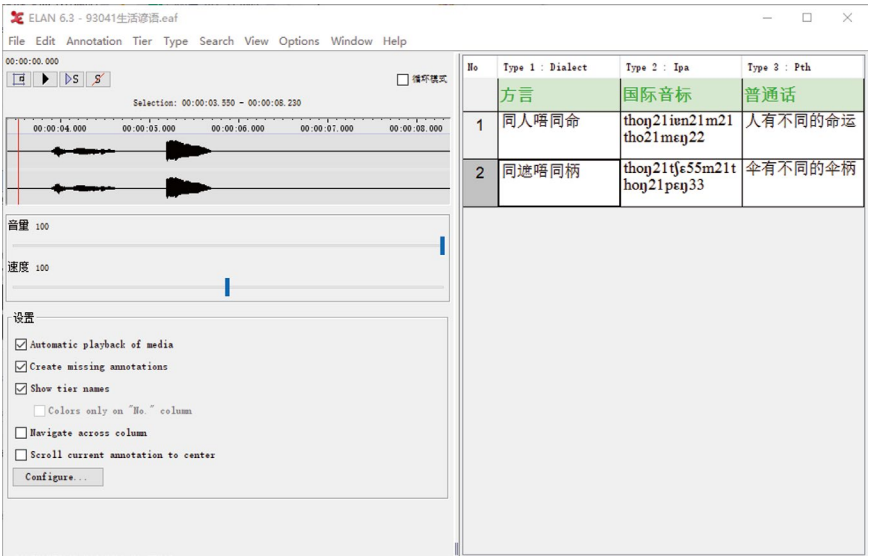


Fig. 38 Transcribing sentence by sentence

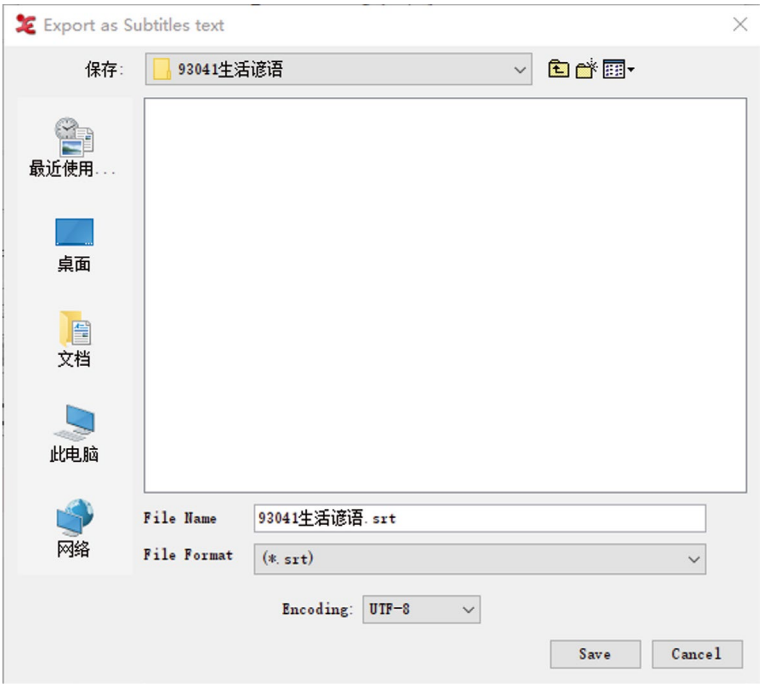


Fig. 39 Exporting subtitles

The subtitle file must have the same name as the video and audio files, or else the player will not automatically recognize it.

2. Converting the external subtitle file to UTF-8 format

Right-click on the subtitle file in *.srt (or *.lrc) format and select "Edit With Notepad++". After launching Notepad++, click "Format" and "Convert to UTF-8" in the menu bar. Then save and close. (See Fig. 40.)

3. Playing a video file with subtitles

Open the video file with the same name as the subtitle one directly using QQ Player, Baofeng Player, or other media player software. Subtitles will be displayed in the video. (See Fig. 41.)

IV. Archiving Documents

1. After the audio and video processing is complete, organize the various documents according to the following structure (see Table 6). The "Audio and Video Processing" folder is located in the "Survey Site File Package\Electronic Documents to be Submitted" folder.

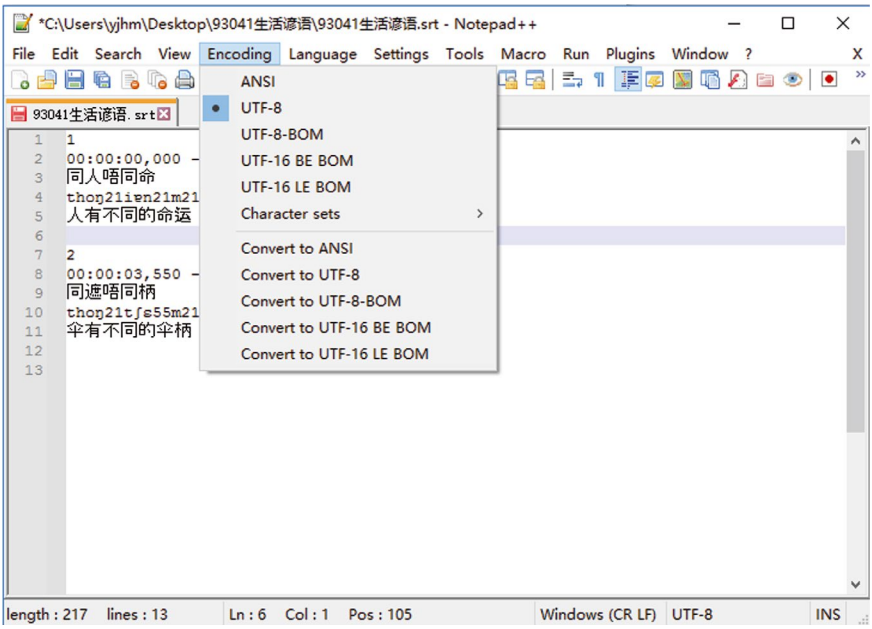


Fig. 40 Converting the external subtitle file to UTF-8 format

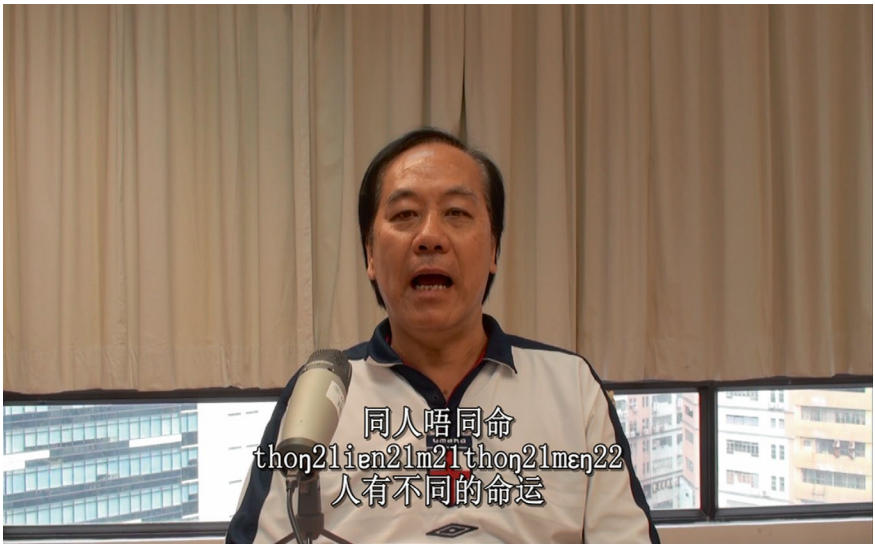


Fig. 41 Playing the video file with subtitles

Table 6 Folder structure of "audio and video processing"

Folder	Folder	Folder	File
Audio and video processing	Pronunciation videos	93041 Life Proverbs…	93041 Life proverbs.mts 93041 Life proverbs.wav 93041 Life proverbs.eaf 93041 Life proverbs.srt 93041 Life proverbs.lrc 93041 Life proverbs.pfsx

2. Put the folder containing the video with the same name together with all other files into the "Survey Site File Package\Electronic Documents to be Submitted\Audio and Video Processing\Pronunciation Videos" folder.

V. Specifications for Data Submission

After all these tasks are completed, add the name of the survey site in the "Electronic Documents to be Submitted" folder name, e.g., "Electronic Documents to be Submitted at Tangxi Survey Site". Submit the folder to the research project team together with the paper version of the *Survey Handbook* and the recording log of the survey site. (See sample in Table 7.)

Table 7 List of documents to be submitted at Tangxi Survey Site

Folder	Folder	Folder	Folder	File
Electronic Documents to be Submitted at Tangxi Survey Site	Corpus Collation	Templates	Excel files	1 Overview.xls
				2 Pronunciation.xls
				3 Vocabulary.xls
				4 Photos and videos.xls
			Word files	1 Pronunciation description.doc
				2 Sayings and proverbs.doc
				3 Ballads.doc
				4 Vocal folk art forms and opera.doc
				5 Storytelling in chant and narration.doc
				6 Table of orthography codes.doc
				7 Transcription and proofreading log.doc
		Audio recordings	Pronunciation	01011东 (dong).wav …
			Vocabulary	11011房子 (house).wav …
			Discourse	94011 Nursery rhymes.wav …
		Videos	Original pronunciation videos	11011 房子 (house)-11939 住宅 (Residential homes) Addition 3_20110315105004.m2ts …
			Edited pronunciation videos	11011房子(house).wav …
			Original cultural videos	20110315105004.m2ts …
			Edited cultural videos	13031 上梁 (Shangliang)_上梁 (Shangliang)1_20110124岩下 (Yanxia)_20110315105004.m2ts …
			Others	文面女 (Dulong woman with facial tattoo)_20110315105004.m2ts …
		Photos	Survey items	11011 房子 (house)_屋1_20110124 岩下 (Yanxia)_20110124_0133.jpg …
			Survey participants	00001 John Doe_20110315_0001.jpg …
			Survey process	00001 survey_20110315_0001.jpg …
			Others	文面女 (Dulong woman with facial tattoo)_20110315_0001.jpg …

(continued)

Table 7 (continued)

Folder	Folder	Folder	Folder	File
	Visual Guide Compilation	Word files		1 房屋建筑 (houses and buildings).doc …
		PDF files		1 房屋建筑 (houses and buildings).pdf …
		Photo files	1 房屋建筑 (houses and buildings) …	1-9 中心间 (middle room) 20110808_3607.jpg …
	Audio and Video Processing	Pronunciation videos	93041 Life proverbs …	93041 Life proverbs.mts 93041 Life proverbs.wav 93041 Life proverbs.eaf 93041 Life proverbs.srt 93041 Life proverbs.lrc 93041 Life proverbs.pfsx
Documents to be Submitted in Hard Copy	*Survey Handbook*, recording log			
Others[a]				

[a] Refers to survey data not included in the above documents, e.g., existing literature on local dialects and culture, materials on dialects and culture for additional survey, and others

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Postscript

This book is compiled by Center for the Protection and Research of Language Resources of China at Beijing Language and Culture University. The compilation, revision, and approval work are overseen by Professor Wang Lining. The English manuscript is translated by Ms. Wang Peng, revised by Ms. Lynette Shi, edited by Ms. Zhang Siying, and proofread by Ms. Zhang Xiaofang and Ms. Zhang Heng. We also would like to express our gratitude for the hard work put into the publication of this book by Ms. Li Mengxun and Mr. Luo Fan.

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