

Achievements and Contributions

Lay the foundation for precious Chinese digital contents

- ◆ 3.21 million items of important cultural relics have been digitized and presented in the TELDAP Union Catalog. The total number of digitized materials in the Union Catalog is more than 5.28 million.
- ◆ TELDAP has developed 1,367 e-learning courses (1,497.5 hours), including 2,066 units and 3,477 objects/materials. These courses can be accessed via the Learning Object Repository in Taiwan (LORT).

Expand the scale of the knowledge community to fulfill the vision of a knowledge society

- ◆ 379 websites and databases related to humanities, social science and natural science have been built for public use, with an average of 3 million visits per month during July–Nov., 2009.

Enhance the effects of digital archives and e-learning through research and technological innovation

- ◆ Published 1,155 academic papers, 96 of which were published in the SSCI / SCI / EI / TSSCI journals.
- ◆ Developed 27 digital archives core technologies, such as multimedia management, union catalogue, video and audio processing, metadata indexing, Chinese word identification system, digital archive database, spatial and temporal information integration, etc., and 11 innovative e-learning technologies, including intelligent collaborative learning platform, scenario-based Mandarin conversation learning technology, and embedded speech technology.
- ◆ Transferred a total of 71 technologies to domestic and foreign enterprises, government agencies and academic institutions, acquiring license fees of about 26 million NTD.
- ◆ Obtained 34 domestic and foreign patents, and got patent license fees of 3.8 million NTD, which enhanced the patent portfolio that domestic industries need.

Promote the development of industries related to digital archives and e-learning

- ◆ Led domestic archiving institutions and cultural creative industries to attend the Licensing International Expo in US for five consecutive years, not only exposing Taiwan's digital contents to the international market, but also bringing business opportunities to domestic creative cultural industries.
- ◆ Published "TELDAP IPRs Inventory Step by Step" and "TELDAP IPRs Inventory Q & A" to promote the concept of IPRs and the establishment of IPRs management. Also, the "TELDAP Licensing Manual" was published to lower the costs of transaction, and make the licensing mechanism in the field of digital archives more clear.
- ◆ The rate of internal e-learning implementation in companies with the top 1,000 production value in Taiwan increased from 14% in 2003 to 59% in 2008.
- ◆ The production value of e-learning related industries raised from 700 million NTD in 2002 to 1,340 million NTD in 2008.



◆ The AAT-Taiwan contains generic terms to describe these subjects without iconographic subjects and no proper names. The primary users of the AAT-Taiwan include museums and archives catalogers, researchers in art and art history, and students and members of the general public as well.



◆ A Rukai singer. The Beauty of Indigenous Music (II) –The Digital Music Archive Project on Indigenous Music in Taiwan.



◆ Members of the "Promotion and Application of Digital Archives in e-Learning: With the Aborigines of the Taoyuan, Xinzhu and Miaoli areas as Subjects" project went to aboriginal villages to promote e-learning and an aboriginal digital archive data bank, reducing the digital divide between villages and cities.



◆ In July 2009, the National Tainan University Outstanding Research Team held the Ubiquitous Learning and Butterfly Ecology Study Camp. The camp gave children the opportunity to observe butterflies in their natural environment, guided by a PDA. The research team has been invited to Japan and Canada to engage in international exchange, bringing attention to Taiwan's education on butterfly ecology.



數位典藏與數位學習 國家型科技計畫
Taiwan e-Learning and Digital Archives Program

Taiwan e-Learning and Digital Archives Program
Website: <http://teldap.tw/en>
Tel:+886-2-26525274-79
Fax:+886-2-26525280
Address: Joint Library of Humanities and Social Sciences, Academia Sinica, No.128, Sec. 2, Academia Rd., Nangang Dist., Taipei City 115, Taiwan (R.O.C.)
Mail: service@teldap.tw
Collection Provider:
Academia Sinica / Chinese Culture University / Cloud Gate Dance Foundation / National Cheng Kung University / National Museum of Natural Science / National Palace Museum / National Archives Administration



TAIWAN e-Learning and Digital Archives Program 2010



Taiwan e-Learning and Digital Archives Program

Introduction

With respect to academia, industry, laws, applications and technology, the infrastructure required for the development of digital archives and e-learning in Taiwan has already reached maturity. The Taiwan e-Learning and Digital Archives Program (TELDAP) was initiated on January 1, 2008 to promote the application of digital archives and e-learning achievements throughout the society. The goal is to stimulate cultural, social, industrial and economic development, and establish Taiwan's status in the international community by sharing our past experiences with the world. The program aims to preserve our cultural heritage in a sustainable way by developing Taiwan's e-learning industry and widening the application of e-learning in academic research and education.

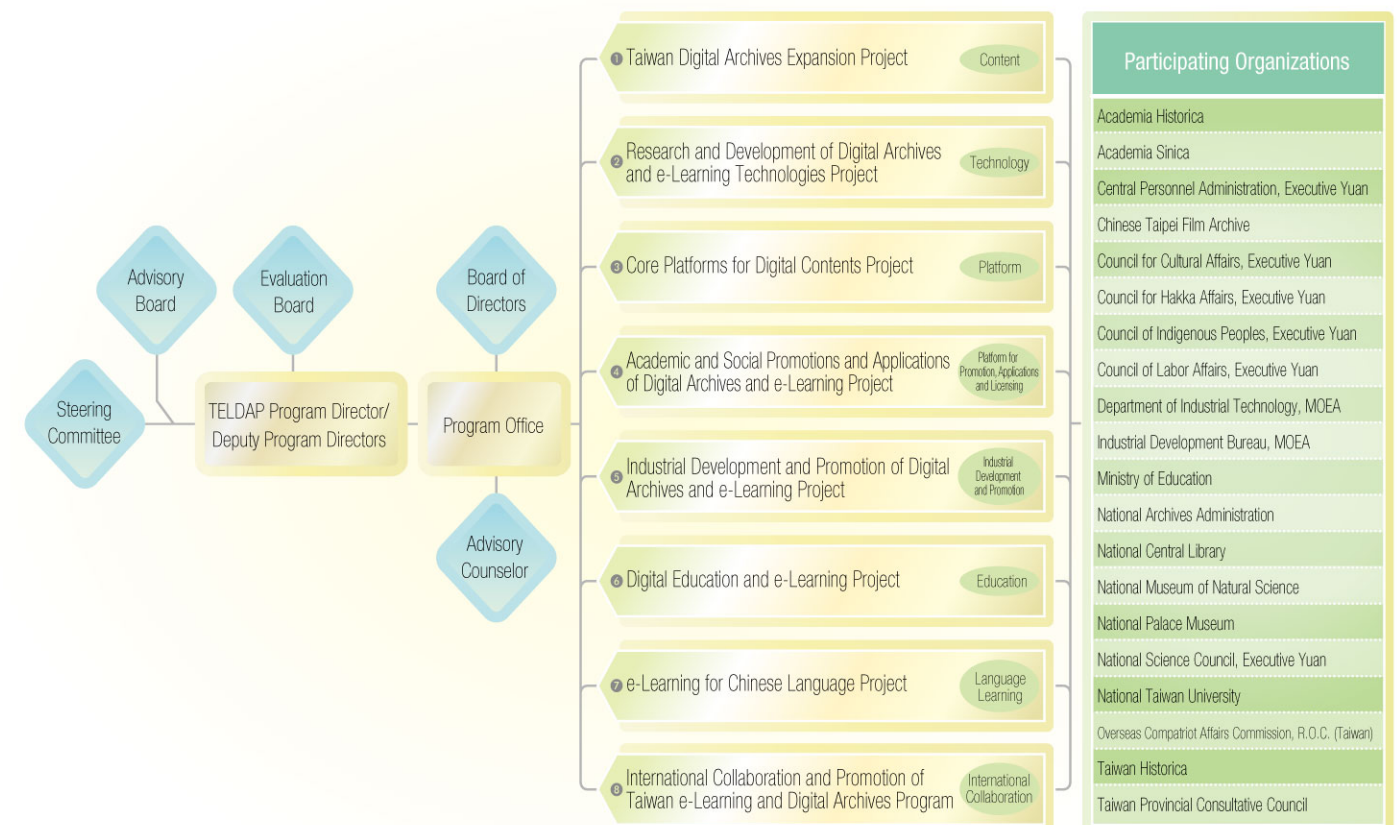
Objectives

The aim of TELDAP is to make e-learning and digital archives available and accessible to the general public, moving towards the establishment of a knowledge society, with the ultimate goal of strengthening national competitiveness. The overall objectives of TELDAP are **archiving the diversity of Taiwan and deepening e-learning in Taiwan**. The sub-objectives are as follows:

1. To showcase the cultural, social and biological diversity of Taiwan
2. To promote the application of technologies and digital contents in cultural, academic, socio-economic and educational development
3. To establish digital archives and e-learning industries
4. To improve the use of e-learning in formal education and lifelong learning
5. To establish Taiwan as a global e-learning center of Chinese language
6. To promote international collaboration network of Chinese cultural heritage and e-learning

Organization and Responsibilities

TELDAP directs eight core sub-projects, which are participated by 20 different institutions and government agencies. TELDAP has a Program Director and two Deputy Program Directors. TELDAP Program Office has one Director who is in charge of the general operation of TELDAP under the supervision of the Deputy Program Directors, who are in turn reported to the Program Director. Also, the Program Office has a Steering Committee, Advisory Board, Evaluation Board, and Board of Directors that oversee the operations of various projects.



Taiwan Digital Archives Expansion Project

<http://content.teldap.tw/index/eng>

The main objective of the Taiwan Digital Archives Expansion Project is to "establish the digital contents in relation to the diversity of Taiwan's cultural, social and natural environment" for value-added applications (education, business and research), either within the Program or the international community.

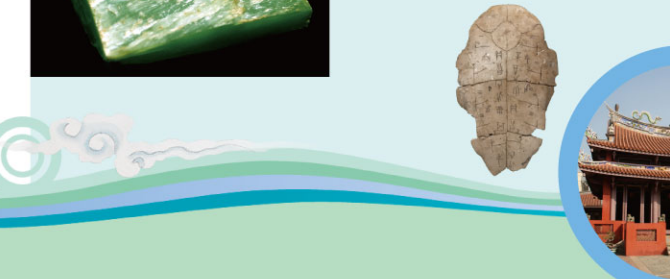
We provide ready and easy access to draw in more digital archive participants from various fields. This not only encourages the standardization of digitization but also reduces digital archive setup costs, increases the added value and influence of digital archives through cross-institutional collaboration. Our digital contents are acquired from public and private sectors under the Digital Archives Open Request for Proposals Project. In fact, most of the archives in the fields of nature, archaeology, language and writing, geography, ethnic culture, history, economic and democratic process, art and aesthetics, and folklife come from these sources.

The artifacts digitization process and technology both abide strictly to the international standards, and at the same time conform to local needs, making it a model for digitization in Taiwan and overseas. In the future, the aim is to systematically integrate digital contents of natural, cultural, and technological resources and present a variety of digital archive materials to encourage the people of Taiwan to identify with our own culture and raise Taiwan's international status as a result.

"Exhibition of Cyber Island, Taiwan" is an interactive platform aimed at collecting digital images on impressions of the local cultural and natural landscape, portraits of everyday life, and creative art pieces from our people.

"Knowledge web of Taiwan's Diversity" is a website that utilizes our dominating advantages of existing digital contents as well as the collective wisdom from users' participation.

Taiwan jade (Nephrite) National Taiwan University/Taiwan Rocks and Geological Historical Material Digital Archives Program.



Research and Development of Digital Archives and e-Learning Technologies Project

<http://tech.teldap.tw/en>

The main research areas include multimedia technologies, video processing, language processing, metadata, rare and variant Chinese characters processing, and multi-modal information querying. On the one hand, we aim to develop new technologies for these areas; on the other hand, we focus on the development of innovative e-learning environments and tools based on these new technologies to facilitate learning and training; wireless and mobile technologies are utilized while developing those digital archives and e-learning systems as well. The establishment of the digitization standard has also been taken into account. Subsequently, large-scale research teams will be established to ensure collaboration with distinguished international institutions. Our integrated technology platform serves to boost cross-field collaboration, and inspire profound breakthrough innovation in the research and development of digital archives and e-learning technologies.

The use of image enhancement technologies such as color tone reproduction to display the scene in an original image (example 1) and enhance the clarity of archival photographs (example 2), or video inpainting to remove subtitles, objects, damage and noise from old film images.

VCenter, short for Video-Center, is a platform for the sharing and distribution of TELDAP audio-visual contents.



Core Platforms for Digital Contents Project

<http://core.teldap.tw/en>

The integration and management of digital contents has become an important issue as the number of projects and the institutions involved in the Taiwan e-Learning and Digital Archives Program grows significantly. In light of this, the Core Platforms for Digital Contents Project is responsible for establishing and maintaining network operational platforms for office automation and for integrating, managing, searching, and displaying the output multimedia digital contents. The goals are to optimize the preservation, retrieval, and presentation of digital archives as well as management efficiency. Our strategic plans are as follows:

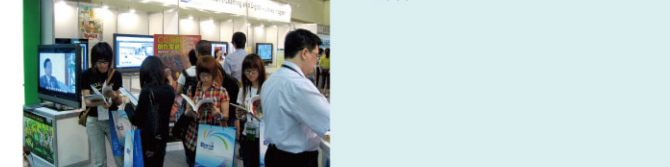
1. Providing common core services.
2. Establishing a uniformed representation and search platform through the Union Catalog.
3. Diversifying, popularizing, refining and globalizing archive exhibitions.
4. Achieving sustainable preservation and management for the archives.

In addition to setting up an e-services environment for library maintenance, document archiving, auditing systems, and publishing e-newsletters, the other tasks regarding data management include designing the TELDAP main portal, setting up a retrieval system by creating the Union Catalog for all archived holdings and developing a remote backup system to achieve sustainable preservation. Currently more than three million digital collections as well as 500 websites sites are exhibited.

TELDP's Collections Portal Site.



The booth of TELDAP in Digital Taipei 2009.



Academic and Social Promotions and Applications of Digital Archives and e-Learning Project

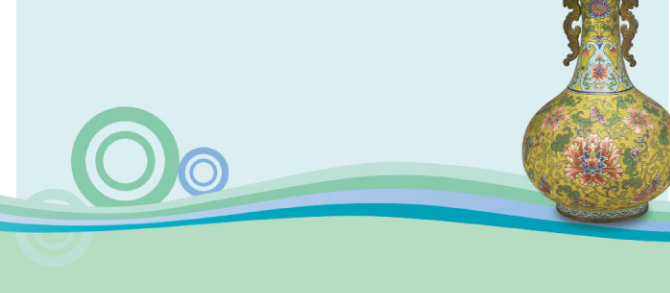
<http://aspa.teldap.tw>

The aim of this project is to promote and apply TELDAP's achievements, both contents and technologies, in various social and academic settings. The project attempts to craft an environment in which everyone can use TELDAP's creation and collection based on their personal preferences without any difficulty. Its main objectives include providing legal advice regarding the use of digital archives and e-learning content, bridging the digital divide in secluded tribes, and organizing contests to encourage the public to utilize TELDAP's accomplishment. The project seeks to foster diverse applications in cultural, academic, social and educational venues. We expect to achieve five primary goals as below:

1. Common Application: to serve as a bridge for industrial-and-academic collaboration.
2. Common Access: to accelerate resources sharing via public licenses and other mechanisms.
3. Common Interoperability: to implement licensing strategies, regulatory mechanisms, and GIS applications, and to expand international networks.
4. Common Distribution: to cultivate the ability to use digital archives materials, to eliminate the digital divide, and to broaden the application of e-learning.
5. Common Utilization: to encourage user dedication and participation by contributing and sharing intellectual resources.

TELDP joined the Information Technology Month, one of the largest domestic Information Technology fairs, to introduce the project's achievements and to encourage the public participation in TELDAP's experience.

We held several workshops to explain to college students about how to utilize TELDAP's results in their works and how to participate in the Digital Archive and E-Learning Applications Competition.



Industrial Development and Promotion of Digital Archives and e-Learning Project

<http://idp.ncu.edu.tw/english>

The main objective of the Industrial Development and Promotion of Digital Archives and e-Learning Project is to promote the digital archives and e-learning industries and to explore their potentials in the global market. It also has the following missions:

1. Guiding companies to commercialize academic research results on digital archives and e-learning: This project seeks ways of building prototypes based on academic research and helps relevant industries transform academic knowledge into commercial products.
2. Developing new business models: developing value added applications by adapting emerging technologies and platforms (e.g., Mobiles, Game-based learning, Soft electronics, etc.).
3. Encouraging cross-industries collaboration: strengthening the e-learning industry and explore various new markets and business opportunities by assisting publishers, platform companies and e-learning enterprises to collaborate with or via integration with other businesses.
4. Assisting tutoring school sector to employ e-learning technologies: transforming the sector into a major industry to become an important part of Taiwan's education system, extending the application ranges of e-learning, improving learning efficiency and increasing business opportunities for digital industries.
5. Boosting international communication and marketing: enhancing the professionalism of Taiwan's e-learning industries by recruiting professional lecturers and consultants from abroad and encouraging international communication and global marketing, to keep abreast of the latest developments and trends in the world's e-learning industries. By doing so, we can improve Taiwan's digital archives and e-learning industries and help uplift the competence of related industries.

Using a mouse to experience the beauty of Chinese calligraphy.

Dr. Yao-Ting, Sung and Dr. Ulf-Daniel Ehlers signed an MoU to cooperate with each other to promote the quality of e-learning.



Digital Education and e-Learning Project

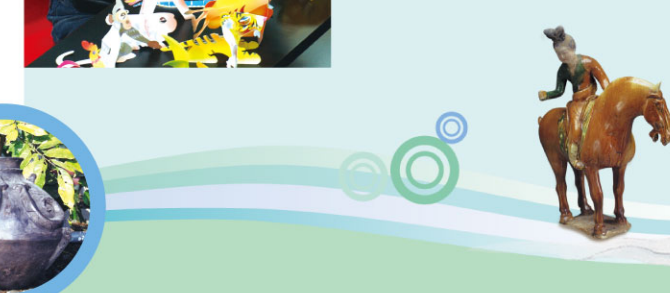
<http://learning.teldap.tw/en/>

The goals of the Digital Education and e-Learning Project are to promote the application of e-learning and to develop e-learning ability. By doing so, we can improve the level of cultural literacy and the competitiveness of Taiwanese. Resources from the Ministry of Education, the Central Personnel Administration, the Council of Labor Affairs and the Council for Cultural Affairs have been combined and integrated. Digital archives and e-learning have become an important part of education in Taiwan. A great amount of digital courses and websites have been designed and launched for professional training. This training is targeted at teachers, students, labors, civil servants and the general public. The main objectives of this project are as follows:

1. Training Chinese teaching personnel in the implementation and application of e-learning, and broadening the user base of digital archives and e-learning.
2. Developing and promoting e-learning courses and materials for the Taiwanese Formal Education system to improve the quality of education.
3. Combining existing digital contents and platforms to develop lifelong learning materials for labors.
4. Integrating the e-learning resources of government departments, training human resources for civil service, and increasing the learning efficiency of civil servants.
5. Establishing and promoting an art and cultural e-learning portal website for the public.

The website of the Digital Education and e-Learning Project.

"Art Teaching Promotion" course - Paper sculpture: A teacher demonstrating paper sculpting.



e-Learning for Chinese Language Project

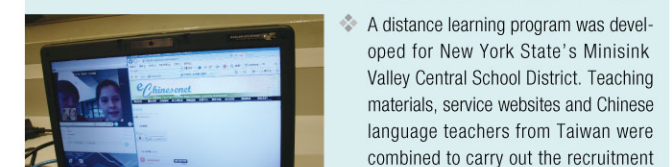
<http://elcl.teldap.tw>

The project is mainly concerned with the promotion of Mandarin Chinese (Huayu) and the Hakka language, with the emphasis on the overseas promotion of Chinese language. The main methods are: honing Chinese teachers' teaching skills in the e-learning environment, promoting the development of high-quality Chinese language e-learning products, establishing overseas Chinese learning centers and developing a number of online Chinese and Hakka courses. Chinese e-learning research proposals are also publicly solicited. The Ministry of Education, the Overseas Compatriot Affairs Commission, the National Science Council and the Council for Hakka Affairs all take part in the execution of the project. The aims of the project are:

1. Training Chinese teaching personnel in Taiwan and abroad and equipping them with e-learning teaching skills, increasing their ability to compete in the international Chinese language teaching market.
2. Assisting industries related to Chinese language learning; establishing enterprises that are internationally competitive in order to build a top global brand for the Taiwan-based Chinese language e-learning industry; and promoting the establishment of commercial Chinese language learning centers around the world to expand the overseas market.
3. Increasing the number of people participating in Chinese e-learning through learning websites, on-line courses, training courses and learning centers established by the project.
4. Elevating the quality of Taiwan's e-learning research through the Outstanding e-Learning Research Center/Group Project, and publishing high quality academic papers to help make Taiwan a major research center for Chinese language learning.

Using a Web 2.0 framework, the Overseas Compatriots Affairs Commission established a new Huayu World website in 2007 that was rich in content, winning worldwide recognition. In the future it can be expected to develop into the most convenient channel which foreign-born Chinese can use for learning Chinese and traditional Chinese culture and Taiwan's diverse culture. Our goal is to make it the best Chinese learning portal website in the world.

A distance learning program was developed for New York State's Minisink Valley Central School District. Teaching materials, service websites and Chinese language teachers from Taiwan were combined to carry out the recruitment and training of "online Chinese tutors."



International Collaboration and Promotion of Taiwan e-Learning and Digital Archives Program

<http://collab.teldap.tw>

The primary task of this project is to promote the work of the TELDAP internationally by engaging in collaboration and exchange with leading overseas research and archiving institutions. Through continuous effort of translating project resources (including websites, archive catalogs, etc.) into foreign languages, establishing data exchange and collaboration with prominent overseas institutions and managing the Taiwan branches of international organizations (for example, Museum Computer Network (MCN) Taiwan Chapter and CultureMondo Network Asia-Pacific Secretariat), the project has achieved the following accomplishments:

1. Execution of international collaboration projects and the signing of the Memorandum of Understanding.
2. Participation in international conferences and presentation of project results to raise the profile of Taiwan.
3. Hosting several international conferences to expand the international exchange platform.
4. Maintaining and increasing the contents of websites, providing further resources for both domestic and international researchers.
5. Collaboration with organizations around the world to develop international networks.
6. Integrating Taiwan's e-learning resources to raise the international competitiveness.

During 2009 TELDAP International Conference, acclaimed researchers and scholars in the field of digital archiving were invited to discuss their experiences of promulgating and developing digital resources. 446 representatives attended the conference, including 73 speakers from ten countries such as USA, UK, France, Germany, Italy, Japan, China, Taiwan, Philippines and India, and the representatives delivered 84 lectures in total.

This aerial photograph of the Yuan Shan area of Taipei was taken by American forces on Jun. 17th, 1945. During the end of World War II (1944-1945), many aerial photos of major cities and military facilities in Taiwan were taken by American forces in preparation for the air raid. This photo, held by National Archives and Records Administration (NARA), was copied by the Geospatial Data Group of this project during 2008-2009.

