

Heaven on Earth

*The Culture,
Records and Classics of Digital Taiwan*

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The Culture, Records and Classics of Digital Taiwan



Taiwan e-Learning and Digital Archives Program
Special Issue: Achievements of the Taiwan e-Learning and Digital Archives Program

Preface



The National Digital Archives Program and the National Science and Technology Program for e-Learning were founded in 2002 and 2003, respectively, and integrated to form the Taiwan e-Learning and Digital Archives Program (TELDAP) in 2008. This program has brought together top scholars and experts in the fields of academia, biotic, information, education, as well as management, and we hope that in this rapidly-changing digital era, our work will help to enhance the general public's digital literacy and contribute to our country's development. I hereby invite all readers to learn about the achievements of our digital archives and e-learning program over the past decade through this special issue.

**Program Director,
Taiwan e-Learning and Digital Archives Program**

Wang Joun

December, 2010

One of the missions of the Core Platforms for Digital Contents Project under TELDAP is to show the general public the achievements of this national project using multiple channels, including exhibitions, the Internet and publications. This year, we are trying for the first time to adopt the editing style of Mook magazine in our own publication, hoping to provide our readers information on program developments and updates in a more efficient manner. We sincerely hope that this little booklet can bring our digital archives and e-learning into everyone's lives.

**Principal Investigator,
Core Platforms for Digital Contents Project**

Ked-Jeld

December, 2010



Digital technology has brought changes to the way we store information, and the advancement of the Internet has thoroughly revolutionized the way we communicate and transmit information. The accumulation of thousands of years of civilization can be summoned to the screen with just one click of the mouse. Amidst the vast ocean of Internet resources, how do we connect with the contents of TELDAP? *Heaven on Earth: The Culture, Records and Classics of Digital Taiwan* can serve as a nautical map to help readers navigate the open seas of digital knowledge.

**Co-Principal Investigator,
Digital Information – the New and Creative Way
of Communicating, Core Platforms for Digital
Contents Project**

Zongkun Li

December, 2010

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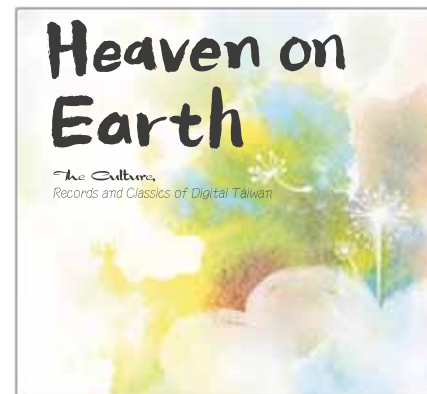
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Special thanks to the following contributors of photographs:

Chinese Taipei Film Archive; Council for Cultural Affairs, Executive Yuan; Digital Archives Service Extension Office, Academia Sinica; Institute of Ethnology, Academia Sinica; Ministry of Education; National Museum of Natural Science; National Palace Museum; National Taiwan University; Overseas Compatriot Affairs Commission, R.O.C. (Taiwan) (in alphabetical order)



**Special Issue: Achievements of the Taiwan
e-Learning and Digital Archives Program**

Publishers:

Taiwan e-Learning and Digital Archives Program
Core Platforms for Digital Contents Project

Editor-in-Chief: Zong-Kun Li

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Yu-Hao Chang

Graphic Design: ad Design co. LTD

Printed by: Wen Sheng Enterprise Co., Ltd.

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ISBN: 978-986-02-6483-8

Publication Date: December 2010

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The original of the cover photograph is kept in the
Museum of Institute of Ethnology, Academia Sinica

Siaolin Night Festival, 2000



Photography by Pan, Ing-Hai (2000, Kaohsiung)
Link to photo: ianthro.tw/c/foe : img : 38728

Germination

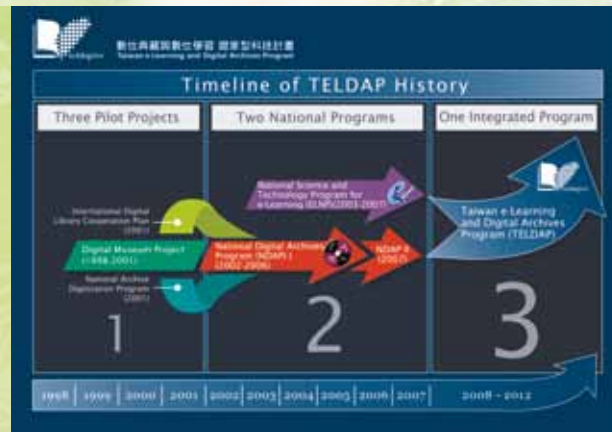
The rise of information technology and the Internet has forever altered the ways of communicating information and conveying knowledge. Nowadays "informatization" widely influences our society that affects people's daily lives, the workplace, study and research, leisure and entertainment. Information technology gradually changes people's fundamental attitude, mindset and method of doing things, and lifts the curtain to reveal a digital era where society, culture, education and learning are completely transformed.

The economic miracle of last generation has turned into the prosperous technology industry today, and now the goal of the 21st Century is to cultivate Taiwan's expertise in digital content. With Taiwan's abundant and unique cultural resources and a rich biodiversity, we want to use our digital archives as a basis and apply it in everyday learning. The Taiwan e-Learning and Digital Archives Program (TELDAP) was officially launched on January 1, 2008.

Archiving cultural diversity and promoting e-learning in Taiwan

In 2002, the National Science Council under the Executive Yuan (NSC) initiated the first stage of the National Digital Archives Program (2002-2006) and National Science and Technology Program for e-Learning (2003-2007), which involved the digitization of artifacts from government-owned collections, setting a commercial foundation for digital content, and driving a new wave of digital education and research. By doing so, the NSC's goal was to improve the general public's digital literacy, and gradually strengthen Taiwan's competitiveness and increase the country's international exposure through academic research, cultural education, and industry collaboration.

With the implementation of the programs the need to effectively consolidate all of the resources across the board arose. National Digital Archives Program and National Program for e-Learning were merged in 2008 to form the "Taiwan e-Learning and Digital Archives Program" (TELDAP). The goal of TELDAP is to digitally archive all aspects of Taiwan and promote e-learning in order to achieve the following main objectives: (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 for Chinese language; and (6) to promote international cooperation network for Chinese cultural heritage and e-learning.



Taiwan Digital Archives Expansion Project

The main goal of this project is to create and showcase the various digitized contents of Taiwan's society, cultures, and natural environments, and provide basic digital products that can be used as value-added elements for educational, commercial, academic and international collaboration purposes. Moreover, through an open request-for-proposals mechanism, this project has been gathering resources from private collections, popularizing digitizing standards, encouraging experience sharing, lowering the construction cost of digital archives, and systematically consolidating all of Taiwan's digital resources in order to supply digital contents from all fields of knowledge, promote cultural identity among the Taiwanese people, and increase the international visibility of this project.

Core Platforms for Digital Contents Project

This project is in charge of developing a digital content management system and an office automation system, publishing an electronic newsletter in Chinese and English, and providing common core services, such as organizing annual exhibitions. To showcase TELDAP's achievements in a diversified, popularized, sophisticated and internationalized manner, this project has constructed a union catalog to integrate heterogeneous multimedia data in a uniform search platform. It has also established a long-term remote backup system for storing all of the digital data generated by TELDAP in order to facilitate the data's sustainable preservation and management.

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

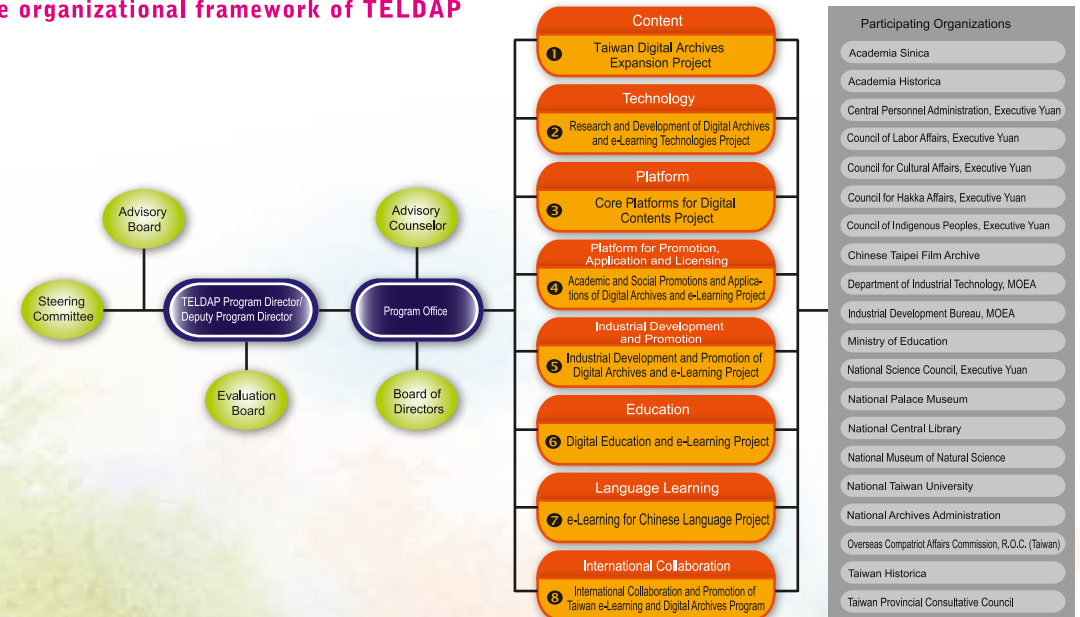
This project is responsible for developing the core technologies used in TELDAP. It provides information technology consultation for TELDAP's various sub-projects and assists with all kinds of service demands. By developing applicable tools for archive systems, setting guidelines for digital archiving, and following future wireless Internet and multimedia development trends, we have built a foundation for relevant technical support and services. At the same time, we have established a research center along with a large research team to develop tools for e-learning, and with an integrated technological platform as a basis we encourage interdisciplinary cooperation for developing advanced technologies for digital archiving and e-learning.

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

This project is responsible for facilitating the integration of TELDAP's contents and technologies with culture, academia, society and education; creating a wholesome environment for users of TELDAP; and encouraging the general public as well as those affiliated with academic and research institutions to utilize the knowledge TELDAP has to offer and helping the aforementioned groups to maintain a public space for collaborative creations. Its more practical tasks include providing IPR clearance and legal services, and organizing business application and teaching material design competitions, hoping that someday the aggregate achievements of TELDAP can be utilized by everyone.

TELDAP is divided by field of expertise into 8 sub-projects, and 20 organizations and government agencies have been contributing considerable amounts of human and material resources to digitally represent Taiwan's cultural and bio-diversity. The team has also produced a diversified selection of digital courses, hoping to create an e-learning trend, and at the same time devised a reward mechanism aimed toward the digital archive and education industry in order to encourage more companies to invest in the cultural, creative and digital teaching material market and together broaden Taiwan's digital horizon.

The organizational framework of TELDAP



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

The main goals of this project are as follow: to elevate the core abilities of the digital archives and e-learning industries; to create innovative models of learning, service and management; to increase market demands with sufficient rewards and incentives; to assist companies with improving their application of e-learning in order to reach Level 3 and 4¹; to promote e-learning in view of the operation strategies of relevant industries; facilitate the integration of different industries; and finally, to establish a profitable business model and help companies enter the global market using the domestic market as support, hoping to increase the value of commercialized digital archives and e-learning.

e-Learning for Chinese Language Project

The main objective of the e-Learning for Chinese Language Project is to integrate academic, industrial, and state resources to develop high quality Chinese language e-learning products, studies, and professional talents. The project is more than merely educational; it is a display of the diplomatic and business energy of Taiwan. Taking the existing industrial and state resources and current achievements in the academic study of Chinese language as its foundation, we hope that this project will put Taiwan on the map for the e-learning of the Chinese language.

Digital Education and e-Learning Project

The purpose of this project is to expand and deepen the scope of the application of digital education and Internet learning to formal education and lifelong learning, as well as adequately and efficiently cultivate and utilize human talent and resources to elevate that quality of labor and professional skills in Taiwan. This project is a collaborative effort by the Ministry of Education and the Executive Yuan's Central Personnel Administration, Council of Labor Affairs, and Council for Cultural Affairs, and it is in charge of planning digital curricula and links to Internet learning for elementary and middle school levels all the way to high school, university and adult education.

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

This project is focused on promoting the internationalization and enhancing global awareness of TELDAP, and establishing an international cooperation network. It consolidates digital contents across numerous organizations, maintains a global portal, and shares Taiwan's experiences with the international community. In addition, the project hosts international conferences, establishes working relationships with world-class research teams, and operates the Taiwan chapter of Museum Computer Network (MCN) as well as the CultureMondo Network Asia-Pacific Secretariat. The project's long-term management of TELDAP's achievements will help to improve Taiwan's status in the international and academic community.

¹Prof. Donald Kirkpatrick of the University of Wisconsin, U.S.A., created a model for training evaluation that comprises of four levels: Level 1 (the student's level of satisfaction with the training), Level 2 (the resulting increase in knowledge or capability), Level 3 (any change in behavior) and Level 4 (the effects on the business or environment resulting from the trainee's performance).

Archiving culture and memories, learning the digital lifestyle

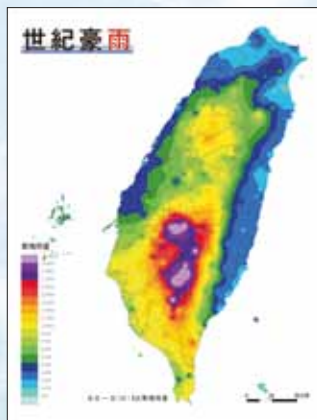
Typhoon Morakot made an enormous impact on the Taiwanese people. Because of this, the editing team of *Heaven on Earth: The Culture, Records and Classics of Digital Taiwan* would like to use this issue's cover story to explore the infinite relationships between "digitization" and disaster. How should digital technology and humanity come together to generate a positive force that can be applied to disaster relief, preservation of cultural assets, and reducing the gap between urban and rural areas? This is one of the questions that this special issue aims to find answers to, and we hereby invite our readers, while reading this issue, to also take the time to consider these difficult questions of the digital era.

TELDAP's involvement with flood relief

One stormy weekend in August 2009, Taiwan was ravaged by its deadliest flood in half a century. Everyone in Taiwan was emotionally affected after learning about the severity of the situation through the media and the Internet. As citizens of Taiwan, the team members of TELDAP were also helping in every little way they could from their respective corners. For instance, the TELDAP e-Newsletter helped Public Television Service (PTS) and Paperwindmill Theatre disseminate information on their charity performances and requests for donation, hoping to ease the pain of the typhoon victims a little with this newly popularized form of Internet media.



The TELDAP e-Newsletter helped to disseminate news on post-Morakot charity performances.



An issue that perhaps deserves more attention from the government and members of society is how to effectively organize all the donations and rescue teams coming in, increase the efficiency of disaster relief efforts, and get aid to the victims much faster. We may learn from the example of a group of volunteers from Academia Sinica who contributed to disaster relief efforts using their professional IT skills. After Typhoon Morakot struck, the volunteers quickly entered the disaster zone in Kaohsiung County and constructed an information service website using the Sahana Disaster Management System. The Sahana system not only lessened the burden of traditional communications facilities by keeping track of all the types and amount of supplies and manpower needed in the disaster areas and managing logistics and human resources, but also allowed new volunteers to learn about their missions and prepare themselves mentally in a very short period of time. Even today, citizen journalists who contribute to the Typhoon Morakot Independent News Network continue to cover important topics such as post-typhoon rehabilitation.

Even in the darkest abyss of a catastrophe we can see kind acts of humanity being carried out by technology. In the 21st century, "progress" is constantly being questioned, but maybe we will be able to find technology an appropriate and positive place in the course of civilization.

Typhoon Morakot in 2009 brought unprecedented disaster to southern Taiwan. This GIS image indicates that rainfall in recent years is showing signs of polarization.

Resource Links

Typhoon Morakot Independent News Network	www.88news.org
Sahana Taiwan Development Forum	sites.google.com/site/sahanatw
Persevering through Wind and Rain—Memories of the Island People	ds2.th.gov.tw/ds3/app101

Siaolin Night Festival, 1998
Photography by Pan, Ing-Hai (1998, Kaohsiung), from the Museum of Institute of Ethnology, Academia Sinica
Link to photo: ianthro.tw/c/ioe:img:37108



Memories in heaven preserved on earth

In 1998 and 2000, anthropologist Pan, Ing-Hai and his team visited Siaolin Village in Kaohsiung County's Jiasian Township several times to photograph the Siraya tribe's "night festival." The night festival showcases the indigenous people's rich traditional culture and is an important ceremony that symbolizes the continuation of the villagers' spirits.

In August 2009, Siaolin Village was practically wiped off the face of the earth. Did memories of the village and villagers disappear with it? The answer may not be so desolate, because the Academia Sinica's Institute of Ethnology assisted with reviewing policies for rebuilding the typhoon-stricken areas from an anthropological point of view and even released Prof. Pan, Ing-Hai's collection of images of Siaolin Village, which serves as a base for the reconstruction of the local culture and memories.

The controversies involving ethical issues and rights of interpretation between anthropology and aboriginal groups have not ceased in Taiwan since the 1980s. However, the Institute of Ethnology's release of the Siaolin Village collection was not intended to impose a set of stiff and foreign paradigms on Siaolin Village, but instead to remind the Taiwanese society that when faced with nature's wrath, the civilization and memories that we take for granted may all of a sudden become very fragile. Memories strung together by 0's and 1's can help Taiwan pave the way to the next era.



Siaolin Night Festival, 2000
Photography by Pan, Ing-Hai (2000, Kaohsiung), from the Museum of Institute of Ethnology, Academia Sinica
Link to photo: ianthro.tw/c/ioe:img:39267

Resource Links

Digital Archives of Institute of Ethnology, Academia Sinica	ianthro.tw
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The long-term responsibility of e-learning to diminish urban-rural gap

Typhoon Morakot severely damaged schools in the disaster zone that used to serve as community Internet hubs. Would the immense gap that had previously existed between urban and rural areas further widen because of this ruthless flood? Can e-learning play an active role in the rehabilitation process? TELDAP initiated the "Rebuild Education, Create e-Classrooms and Shorten the Digital Gap in Rural Kaohsiung County" project, asking the Institute for Information Industry to invite over ten companies from the e-Learning & Digital Archives Industry Alliance and some e-learning device vendors to donate facilities for digital education, and inviting teachers and volunteers from Taipei First Girls High School and the Affiliated Senior High School of National Taiwan Normal University to contribute content and information. Together, the various parties successfully set up "smart classrooms" for Liouguei Elementary School and Laonong Elementary School, fully utilizing the Internet's advantage of having no boundaries to deliver schooling from northern Taiwan to the kids in southern Taiwan's disaster areas to help them learn and grow.

This e-learning project covers a wide range of themes, including helping the school children learn about city life and information technology, so as to equip them with knowledge and skills for the future. For example, in a finance management class for kids, the children learned the concepts of interest rates and savings, as well as how to use an ATM.



The children were filled with curiosity about the smart classrooms and information technology. They became even more excited when we introduced remote teaching and digital teaching. A sixth grader at Liouguei Elementary School told us after class, "Now I always want to come to the new classroom, because no matter how complicated the math problems are, they become super easy when they're taught on the electronic interactive screen. I am no longer terrified of math."

Smart classroom: School children interacting with instructors



Thomas L. Friedman once said, "The world is flat." With the aid of digital technology and the Internet, space and time are no longer obstacles. Even people separated by thousands of miles now have the opportunity to connect. The Cinderella-like story of these two elementary schools is just the beginning, for it is everyone's goal to fairly distribute digital resources to all rural areas and create a digitally inclusive society.

Know the future by looking at the past

1803 A.D., 9th month of the 8th year of Chia-Ch'ing Reign, Ch'ing Dynasty. Heng Jia Lou (衡家樓), Henan Province.

At the time, the waters in the Yellow River surged violently, "rising over three hundred feet." Despite being known as the cradle of Chinese civilization, the Yellow River had turned into a flood that took lives and belongings. Upon examining the Heng-Gong Files (衡工檔) from the Ch'ing Dynasty, which are now kept in the National Palace Museum, historians could clearly observe the Ch'ing government's attitude toward flood relief and improving the water conservancy and irrigation system. The files quote the emperor as saying, "I am deeply concerned about the flood day and night, and I cannot let it off my mind." This is an exemplar of the sense of responsibility and attitude that government officials should have when faced with a national crisis.

1959 A.D., Taiwan. Areas in central and southern Taiwan were being devastated by the floods of August 7.

Employees of the Taiwan Province Movie Production Studio (臺灣省電影製片廠) went into the disaster zone and captured many precious images. At the time, the USS Thetis Bay (LPH-6) was dispatched from Hong Kong to assist with disaster relief. The U.S. Navy sent thirteen helicopters to transport supplies, and the soldiers on the ship "all worked overtime to supply bread to the flood victims, working as fast as they could to bake bread, pack the loaves into paper boxes, and carry the boxes onto the deck and into the helicopters..." The contrast between the contents of this video clip archived by the Chinese Taipei Film Archive and the foreign aid controversy that took place during Typhoon Morakot in 2009 leaves much for all to reflect upon.



A scene from the USS Thetis Bay's relief mission, Historical news footage captured by the Taiwan Province Movie Production Studio (digitized in 2008) Vol. 341, currently kept in the Chinese Taipei Film Archive

Historians often lament that the biggest lesson that people learn from history is that people will never learn any lessons from history. Yet the present is an accumulation of the past. If we can slow down and humbly learn from past mistakes, perhaps we might be able to avoid losing more lives in future tragedies.

In any case, thanks to the power of digital technology and the Internet, historical lessons are no longer deeply buried in books or hidden in vaults. They are within easy reach, just waiting for someone wise to look at them and know what to expect for the future.

Resource Links

[Chinese Taipei Film Archive](http://www.ctfa.org.tw)

www.ctfa.org.tw

Meet the classics Browse national treasures from the comfort of your home

In your busy daily life, have you ever heard a longing voice in your heart says, "Let's spend tomorrow's day off at the museum!" Or, "We haven't taken the kids out in a long time..." Alas, because time is so scarce, you often end up writing a rain check. But thanks to digital archive technologies, which is capable of transcending the barriers of space and time and storing images and introductions of millions of items using the latest cloud computing concept, you can now sit in front of your computer and admire a museum's exquisite treasures and historical artifacts as you sip a cup of coffee, without even having to visit the museum physically. Piles and piles of digital treasures are just waiting for people to explore and be artistically inspired by them.

The door to the digital archives' treasures Union Catalog | catalog.digitalarchives.tw

Our digital archives encompass a very wide range of subjects and fields, including biology, geology, historical files, calligraphy and paintings, vessels and other artifacts, anthropology, and journalism, just to name a few out of dozens. In order to consolidate the various types of databases that belong in each field, a single yet interdisciplinary Union Catalog was created so that users can directly browse and search in the digital archives owned by different institutions all on one website. The catalog provides basic information on the items, digital image previews, and links to the original databases.

Academia Sinica Digital Resources and Digital Archives Exhibition Center

Professional knowledge of certain academic disciplines may seem unattainable to people who are not academics, but you can in fact find it right at your fingertips. The Academia Sinica Digital Resources and Digital Archives Exhibition Center contains digitized resources relating to Taiwan's fishes, malacofauna, plants, aboriginal cultures and artifacts, historical maps and remote sensing imagery, diplomatic and economic documents, Chinese historical artifacts of great value, and Chinese and Formosan languages, as well as the information technology used in the digital archives. By promoting these resources through our exhibition center, we hope to create a pleasant space where academic resources can be shared and cultural assets can be preserved.



"Language in Space and Time" Special Exhibit: The Academia Sinica Digital Archives Exhibition Center organizes two themed special exhibits a year. Combined with lively commentaries and interactive games, this is a fun learning experience that kids and grownups alike should not miss! digiarch.sinica.edu.tw

Taiwan Digital Archives Expansion Project – National Palace Museum Digital Archives Projects

Although the preservation of ancient artifacts becomes more and more difficult as time goes by, digital archiving technology provides new hope for the permanent preservation of cultural relics and artifacts. By utilizing a rigorous digitization process, the National Palace Museum's collection of over 670,000 items can be preserved digitally, and its digital data retrieval systems, 3D virtual collection exhibition system, various promotional videos, and interactive facilities all help to showcase the museum's treasures in a new and contemporary way.



Future Museum: This is a new multimedia installation exhibit based on creations inspired by the National Palace Museum's collections and digital archive contents. This exhibit won the silver medal for the Multimedia Installations category in the 2009 AAM MUSE Awards. tech2.npm.gov.tw/da

Digital Archives Project of National Taiwan University

Since the historical National Taiwan University started participating in TELDAP, it has digitized and archived resources accumulated since its Taihoku Imperial University days during the Japanese colonial period, covering Taiwanese history, humanities and culture, and natural sciences, which are crucial to academic research. Its digital database allows the general public to access its collection, which contains many cultural characteristics that are distinctly Taiwanese, and is beneficial to the advancement of academic research and e-learning.



Digital Archives Resource Center main search page www.darc.ntu.edu.tw

National Museum of Natural Science – The Digital Museum of Nature & Culture

Comprising six major categories—zoology, botany, geology, anthropology, mycology and phycology—the archived resources with research, education and economic value are digitized and popularized, thereby creating a cross-disciplinary database (multimedia database, specimen database, knowledge database and learning resource repository) for the general public to browse. The digital archive resources will be used to further develop diverse, value-added educational content that is rich in culture, humanity, technology, creativity and fun. The fruits of the digital archives will be implemented to promote education and become an integral part of the public's lives.



The Digital Museum of Nature & Culture website digimuse.nmns.edu.tw

Resource Links

TELDAP Achievements

digitalarchives.tw



Cultural inheritance at your fingertips The road to formal education and lifelong learning

e-Learning is an unstoppable trend. Electronic book bags, interactive whiteboards, and e-classrooms will soon become every teacher's best teaching buddies. School-aged children of the Net Generation have grown up surrounded by computers, the Internet and the constant audio and visual stimulation they provide, and therefore computer-related learning aids will play an increasingly important role in these kids' education. In order to improve the effectiveness of Taiwan's education, the Ministry of Education is applying digital resources from our archives to education, converting them into assets, objects, and materials for learning, and then turning them into digital educational resources that are in accordance with the needs and usual practices of a learning environment. So far, e-lessons have been planned for the third to sixth grades on the subjects of social sciences, arts and humanities, and natural sciences. The kids can browse the famous painting "Along the River during the Ching-Ming Festival" and compare the various aspects of daily life in the old days with people's lives today and create their own online picture book. A lively and interesting e-learning setting such as this encourages creative thinking and allows the children to have fun while they learn.



Integrating Digital Archives into Teaching Portal



A drama class promoted on the Council for Cultural Affairs' e-Learning for Art and Culture

Resource Links

Integrating Digital Archives into Teaching Portal	idatp.moe.edu.tw
Information Technology in Teaching for High School	hsmaterial.moe.edu.tw
e-Learning for Art and Culture	learning.cca.gov.tw
Nation-wide Labor Education Learning Network by the Council of Labor Affairs	cla.hilearning.hinet.net
e-Learning for Culture	lifelonglearn.cpa.gov.tw

Languages and Taiwan Language learning without borders



"Teachers' Blogs" are where the Chinese teachers share their latest reflections on teaching and their IT skills.

Language is a medium of expression, a collection of symbols carrying cultural meaning, and may very well be our key for unlocking the door to the Chinese market. Due to the rising Asian economy, there is a large increase in demand for Chinese language education from foreigners. Just how popular is Chinese? Even Facebook's founder Mark Zuckerberg spends at least one hour every day studying Chinese! The trend of learning Chinese has caught on globally, and highly developed e-learning environments are further boosting Chinese language courses onto the Internet, where they are reaching students all over the world. With its years of experience operating its Global Chinese Language and Culture Center, the Overseas Compatriot Affairs Commission (OCAC) has built an "E-Learning Huayu of Taiwan" website with a specially designed and user-friendly audio and visual platform for teaching and learning Chinese. Instructors can choose suitable teaching materials according to the students' actual needs and languages and cultural backgrounds, and use the website's built-in online tools to create virtual classrooms that are tailored to their teaching needs. Because e-courses are more effective when accompanied by actual courses in a classroom setting, the OCAC has established 51 Digital Huayu e-Learning Centers (including demonstration sites and teaching sites), linking actual and virtual classrooms and invigorating the e-learning of the Chinese language.

The Moodle classroom overcomes the barrier of time and space, and you can study all courses online any time.

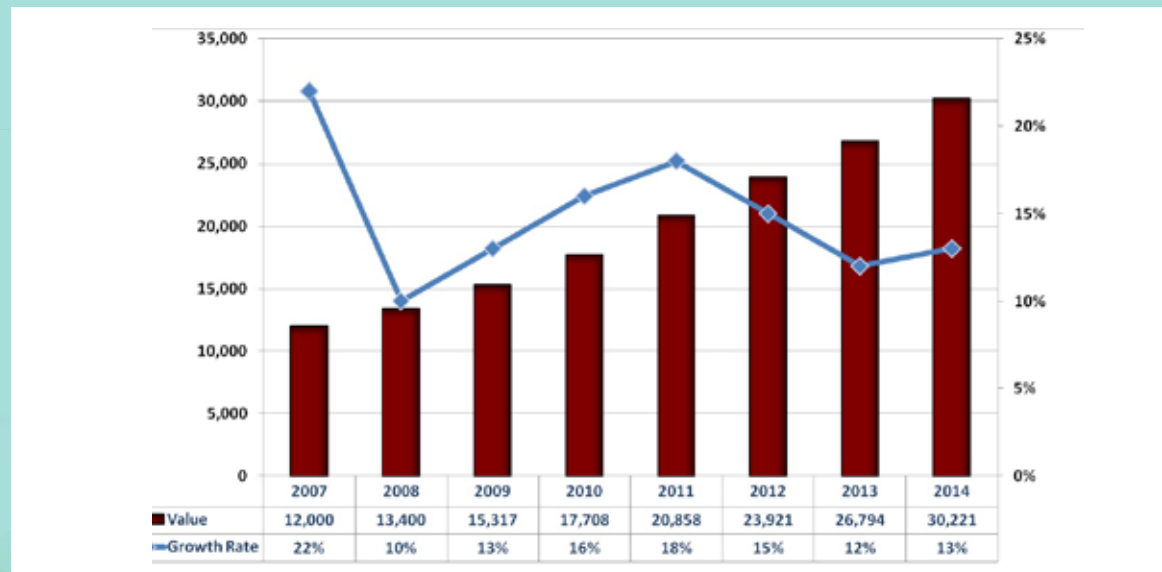


Resource Links

E-Learning Huayu of Taiwan	www.huayuworld.org
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Industrial front line

Gold rush for digital contents



Estimated production values of Taiwan's e-learning industry from 2007 to 2014
Source: Institute for Information Industry, November 2009

New vision for e-learning

In 2009, the production value of Taiwan's e-learning industry had already reached NT\$15.32 billion. Vendors of e-learning materials and carrying devices have sensed this trend and are all racing to enter the market, but at the current stage they are also trying hard to overcome the difficulty of developing digital contents. As the technologies for electronic books and electronic paper become more mature and people's reading habits change, the use of electronic readers in formal education will certainly become a trend in the future. Publishers of traditional textbooks and learning materials should not just digitize their pre-existing stock, for the market for digital archives is a gold mountain waiting to be excavated. The large institutions in Taiwan that are participating in TELDAP are all publishing their collections online bit by bit, and if these digital archives can be linked with e-learning materials, the quality and depth of these learning materials will be significantly improved. Rich digital contents and the commercial link between e-learning and digital archives will become the key niches for Taiwan when entering the global market.

The e-learning company, Hebron Soft Ltd., teamed up with the Microsoft Taiwan-Taiwan Mobile alliance to jointly promote e-learning courses on smart phones.

From the "Phoenix" series, which was jointly developed by National Museum of History and NewChi



New opportunities for the culture and creative industry

From Director Ang Lee's "Crouching Tiger, Hidden Dragon" to fashion designer Johan Ku's "Emotional Sculptures" collection that amazed the fashion industry worldwide, products borne out of the Taiwanese culture and creative industry continue to show unlimited potential. Perhaps the reason why Taiwanese or Taiwan-originated culture and creative brands stand out among those of other ethnic Chinese societies is because of Taiwan's multicultural, tolerant, open and liberal society.

However, without a friendly business environment, even the most brilliant ideas will wither and die like a sprouting seed without sunshine, air and water. Guang-Cai Hao, Editor-in-Chief of Grimm Press, Inc. and a famous figure in the culture and creative industry, is a strong proponent of the belief that "the culture and creative industry needs Kwoh-Ting Li!" Hao believes that Mr. Kwoh-Ting Li and his entire generation's hard work is the reason behind the electronic manufacturing services industry that Taiwan is so proud of today. A good business environment created by government policies and companies' enthusiasm and self-regulation forms a sturdy foundation for the excellent development of Taiwan's IT industry. If those in both the public and private sectors can consolidate and spread the seeds of culture and creativity here and there, even small sparks can turn into a blazing fire. With the help of various industrial development subsidies and matching mechanisms, digital archiving institutions and industry players now have the opportunity to meet and work together to develop this new non-smokestack industry in Taiwan. Furthermore, IPR clearance and authorization mechanisms not only allow digital archiving institutions to concentrate all their efforts on breaking into the culture and creative industry without having to worry about legal issues, but also provide companies in the culture and creative business with a clear basis for intellectual property rights for the digital materials they use. In Taiwan, where the culture is so richly diverse and where so many clever and creative ideas are born, with just a bit more interaction and imagination, anyone can create a great culture and creative business!

NewChi · Rising against the sun

The poised heart sees the innate of those under the sun, the cause for today. The pure bosom foretells tomorrow's outcome through the mists of shadows. Strut forward, collected and poised, into the opening of scenes after scenes of glamour.

Resource Links

[e-Learning and Archive Industry Promotion Plan](http://www.epark.org.tw)

www.epark.org.tw

[e-Learning & Digital Archives Industry Alliance](http://eda.tca.org.tw)

eda.tca.org.tw

[TELDAP Industrial Development and Promotion Facebook Fan Page](https://www.facebook.com/idp.teldap)

www.facebook.com/idp.teldap

Creative minds Tell the world your story

Passion from the Tropic of Cancer

Whether it is something charmingly aged from a local collection or a timeless masterpiece by a famous artist, the Exhibition of Cyber Island is waiting to welcome it into its digital gallery. In the past, privately collected items often get forgotten in a corner in somebody's home due to lack of manpower and money. In order to rediscover the rich and diverse collections hidden all over Taiwan, the "Exhibition of Cyber Island, Taiwan" website was created. This website showcases the unique viewpoints of the creators of the displayed items through various exhibitions with different themes, presenting a most genuine image of contemporary Taiwanese society.

Exhibition of Cyber Island, Taiwan cyberisland.teldap.tw

2009 Taiwan Digital Archives Expansion Project Annual Exhibition



A lighthouse in an ocean of knowledge

The digital archives contain a vast ocean of items. The Knowledge Web of Taiwan's Diversity tries to consolidate more than ten themes on its website, including "Time and Culture", "Folk Arts and Decorations" and "The Flora of Taiwan", by gathering accurate information on each item to enhance its value. Visitors can edit projector slides as well as old and contemporary maps online and freely utilize resources from the archives without having to worry about infringing on any intellectual property right.

Knowledge Web of Taiwan's Diversity knowledge.teldap.tw

2010 Taipei International Flora Exposition: A Flora Enlightenment



Light the torch of creativity in digital archives

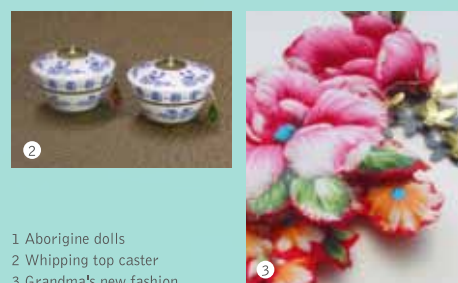
This year is the fifth year of our annual TELDAP Commercial Applications and Lesson Plans Design Competition! With the spirit of promoting value-added applications and the sharing of knowledge with the public, it encourages contestants to use their creativity to highlight the contents and value of Taiwan's digital archives, and in turn achieve the goal of blending archived contents and technology into the development of industry, education, humanity and society.

Through this competition, talented designers can get to know more about the digital archives and apply their findings to the products that they design, and educators can better design their lesson plans with the help of the archives' high-quality and well-preserved metadata after encountering the first-hand material that used to be hidden deep inside museums' storage rooms.

In addition to a material reward, the winners of the commercial application competition will also get to meet with manufacturers at exhibitions and increase their designs' exposure, and winning lesson plans will be shared via an Internet platform to create space for dialogue between the educators and the learners and ignite more sparks for diversified knowledge.

TELDAP Commercial Applications and Lesson Plans Design Competition Website aspa.teldap.tw/competition

Works from TELDAP Commercial Applications Competition



- 1 Aborigine dolls
- 2 Whipping top caster
- 3 Grandma's new fashion

Brilliant craftsmanship A moment in time that lasts forever

Pre-processing



Post-processing



Color tone reproduction techniques

Old photographs fade with age and old films are hard to preserve, so many precious images have deteriorated with time. However, the advancement of digital archiving techniques is putting an end to this curse. The Research and Development of Digital Archives and e-Learning Technologies Project has developed image enhancing technologies that can reduce the chance of images being affected by various human or natural factors in the shooting process that cause them to lose focus, be under-exposed, or not have enough contrast. In addition, image inpainting techniques can be used to remove damaged parts and noise from archived old films and erase captions and objects from the frame, and color tone reproduction techniques can partially sharpen the contrast and adjust color saturation to make colors in old photographs and movies more vivid in order to recreate the original image.

Application of the technology for processing missing Chinese characters in electronic greeting cards



Many Chinese characters did not exist in pre-existing character encoding systems and therefore could not be displayed on websites, creating a big problem for the digitization of ancient texts. The Chinese Glyph Structures Database (漢字構形資料庫) was created in order to handle missing Chinese words in the digital archives and how they appear on web pages, and encourage the learning and studying of Chinese characters. Today the technology for processing missing characters is being applied broadly on various levels. For example, the database's ancient oracle bone script, bronze script, Chu silk script and small seal script are being used to create unique electronic greeting cards, supplement Chinese character lessons and serve as the basis for other value-added products. A Chinese character validation tool (Chinese CAPTCHA) that is being developed, will not only reinforce information security, but also mark a new beginning for Chinese culture in the digital age.

Resource Links

Digital Archives Multimedia Gallery

csl3.iis.sinica.edu.tw/gallery

Chinese Missing Characters System

char.ndap.org.tw

VCenter

vcenter.iis.sinica.edu.tw

iPicBox

ipicbox.tw

International showcase Embracing the global spotlight

Taiwan is a tiny island that covers only 2/10,000 of the earth's surface, but due to its diverse natural environment it is home to 2% of the entire world's species. As an extremely important biological resource bank, Taiwan is not only so important that its own government includes the statistics of Taiwan's living species in Taiwan's country report, but also known across the world as a hot spot for biodiversity. By digitizing all of the information on Taiwan's biodiversity and uploading it to online databases for the purposes of academic exchange and international promotions and applications, we have opened up the door to international collaboration and diplomacy. Now that physical barriers can be transcended digitally, scholars and friends from overseas are also able to visit the precious species living in Taiwan.

Participation in 2010 International Year of Biodiversity



2010 TELDAP International Conference

Cultural diversity is another one of Taiwan's advantages that should not be overlooked. From the globally renowned Yang, Li-Hua Taiwanese opera to Taiwanese painter Ni, Chiang-Huai's paintings of Tamsui, the essences of Taiwan's arts and culture scene are shining on the international stage through multilingual digital platforms. In recent years, experts and researchers have been actively contacting overseas archival institutions, trying to locate items from Taiwan that are scattered in various countries with the hope of using them to reconstruct a complete image of Taiwan. Taking Taiwan's aboriginal culture as an example, during the 19th century when Western powers began competing to enter Asia, many Western government officials, businessmen, missionaries and scientists ended up in Taiwan and had their first close encounter with the Taiwanese indigenous peoples. The result was a huge cultural impact, and many expressions of the aboriginal people's material culture, including clothing, weapons and handicrafts, were taken away from Taiwan by a twist of fate and traveled across oceans to foreign countries. We are currently working closely with the British Museum to digitize the more than 400 Taiwanese aboriginal items in the museum's Asian department. The resulting digitized aboriginal artifacts will allow us to learn about the Taiwanese aborigines' daily lives back then without having to take a long journey to London.

Resource Links

Digital Taiwan - Culture & Nature	culture.teldap.tw
Taiwan Biodiversity Information Facility	www.taibif.org.tw
CultureMondo Network Asia-Pacific Secretariat	ap.culturemondo.org
Museum Computer Network, Taiwan Chapter	mcntw.teldap.tw
International Collaboration on e-Learning Project	elearning.teldap.tw

ONLINE RESOURCES

Projects under the TELDAP umbrella

Taiwan e-Learning and Digital Archives Program
teldap.tw

Taiwan Digital Archives Expansion Project
content.teldap.tw

Research and Development of Digital Archives and e-Learning Technologies Project
tech.teldap.tw

Core Platforms for Digital Contents Project
core.teldap.tw

Academic and Social Promotions and Applications of Digital Archives and e-Learning Project
aspa.teldap.tw

Online portals to the projects under the TELDAP umbrella. The websites contain overviews, latest events and activities, achievements and related links.

TELDAP WIKI wiki.teldap.tw

Created with the open-source MediaWiki platform, this website contains information on all you need to know about TELDAP, including the team behind it, projects, publications, and the technologies developed for and used in TELDAP.

Industrial Development and Promotion of Digital Archives and e-Learning Project
idp.teldap.tw

Digital Education and e-Learning Project
learning.teldap.tw

e-Learning for Chinese Language Project
elcl.teldap.tw

International Collaboration and Promotion of Taiwan e-Learning and Digital Archives Program
collab.teldap.tw

TELDAP e-Newsletter newsletter.teldap.tw

TELDAP's e-newsletter is published in both Chinese and English, and provides the latest project updates and information on new findings.

If you would like to learn more about TELDAP, we welcome you to join the TELDAP e-Newsletter Fan Page on Facebook and explore the future of the Internet and digital culture with us.



www.facebook.com/TELDAPenewsletter



Write for us! The TELDAP e-Newsletter invites you to contribute

If you are well-versed in topics relating to digital archiving and e-learning, we welcome you to contribute to the TELDAP e-Newsletter and share with us your insights on the digital era!

Submission requirements: Please visit our website at newsletter.teldap.tw for more information.



Carved lacquer treasure box decorated with the characters for "longevity" and "spring", Ch'ing Dynasty

National Palace Museum Collection