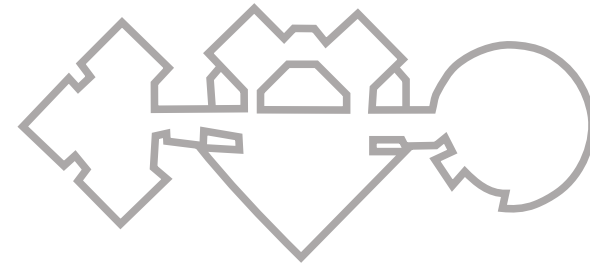


九十一年 年報

# Annual Report 2002



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## Preface

I joined the museum, as director-general, in late May 2002. My first mission was to understand the history of the museum so that I could develop future plans for the museum. I thought that I should read the annual report first, but there none has ever been published since the establishment of the National Science and Technology Museum. All I could refer to were the proceedings of executive meetings.

Over the year, I realized that the authorities conducted different kinds of regular, irregular and even special audits, evaluation or made requests of us. Most of the time, we had to provide routine reports. Sometimes, we were given only a few days or even less than one day to respond to their inquiries. Although most of the staff managed to accomplish the tasks with great skill, there was still a lot of room to improve. Also, there were no specific divisions or staff responsible for some cases. This resulted in the job being passed from one to another. Sometimes, our administrative hierarchy hindered the efficiency necessary to obtain information from other divisions. Internal moves of personnel could cause insufficient understanding of the job and thus issuing inappropriate documents. Consequently, most reports focused on stating the latest news, and hence, lacked in-depth and inductive analysis. They were not elaborated much in the event background, review of the past and even the future plan. Though the reports seemed applicable, they were found unsystematic, inconsistent and un insightful.

As a result, I demanded that the Secretariat compiled this annual report in the executive meeting on April 9, 2003. The preliminary results proved that the administrative heads and the staff had different viewpoints regarding the presentation style of an annual report. Some divisions handed in rough reports; some for detailed ones. When it came to oral presentations, there was so much information that there had been difficult in integration. In fact, there was nothing wrong or right about it. This was just an inevitable result from making something out of nothing. Annual reports have been commonly seen in domestic or international organizations before. If the content and the specifications had been defined at first, it should be easy to provide the materials needed, but something might be missing or seem incompatible. Museum staff got to know and learned from one another through

semi-open discussion, and finally produced a suitable annual report. Furthermore, the knowledge acquired and lessons learned during this process were much more rewarding than the end-justifies-means approach. After more than two months of facing, understanding and solving our problems, the format and the content of this annual report was at last finalized.

The annual report of Year 2002 serves as a reference material for museum staff performance. It is also a key requirement for the museum to be operated like a business. It is an important document to promote the museum's sustainable development. It is a digitized presentation to provide museum's performance. And, therefore it gives us a promising future. There is no future without the past, and now is the past of the future. We shall seize the day and record what has happened, so that the generations will see the true history of the irreversible past. I hope that this first annual report will establish the staff's self-evaluation mechanism, and that all filing tasks can refer to it. And last, I hope this report will become a "must-read" publication for both domestic and international professional institutions that want to learn about us.

Director General

*Hong-Sen Yan*

Hong-Sen Yan

July 2003

# I. Introduction

## 1. History

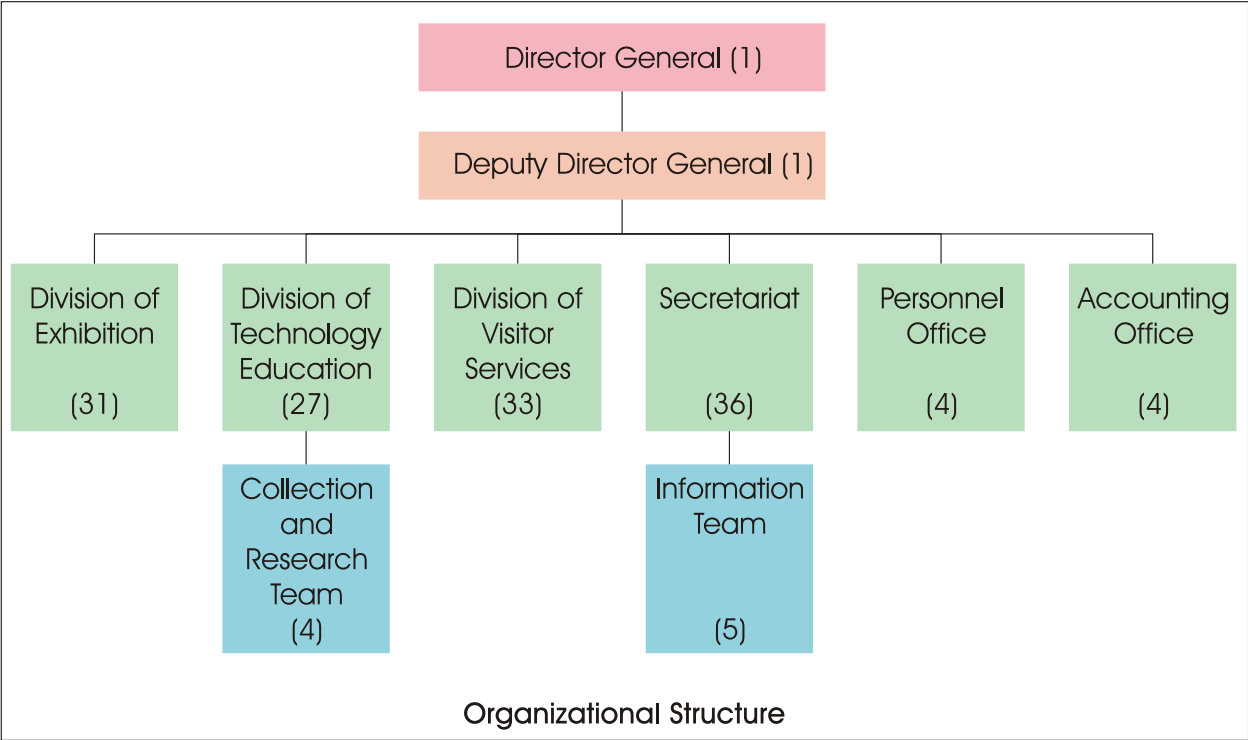
The National Science and Technology Museum (hereinafter called "NSTM") was listed as one of the central cultural facilities to be constructed in The Twelve Construction Projects announced by the Executive Yuan of Taiwan(R.O.C.) in 1979. It was the first museum of applied science on the island as well as the first national institute of public education in Southern Taiwan. Its focus was to collect and study scientific and technological inventions, display themes related to science and technology and promote the education of such as well as providing the public with a place for leisure and lifelong learning. The museum is located on Jiouru 1<sup>st</sup> Road of Kaohsiung city with an area land of 19.16 hectares, and divided into the north area and the south area. The total floor area in the museum is 114,355 m<sup>2</sup>.

- July 1986  
The Planning Council for the National Science and Technology Museum was set up.
- November 1988  
The Executive Yuan approved the construction plan.
- October 2 1989  
The structural construction of the museum's main building was started.
- January 1, 1997  
The museum was approved to officially establish.
- July 26, 1997  
The South Complex was opened.
- September 21, 1997  
The museum park was opened.
- November 9, 1997  
The museum was opened.

## 2. Organization and Staff

### (1) Organizational Structure

The museum is managed by a director-general, in charge of the administration, the deputy director-general assisting the director-general, under which are the Exhibition Division, Technology Education Division, Visitor Services Division, Secretariat, Personnel Office, and Accounting Office. Besides, the Information team and the Collection and Research team were created on July 16, 1998 and February 1, 2001, respectively.



### (2) Staff

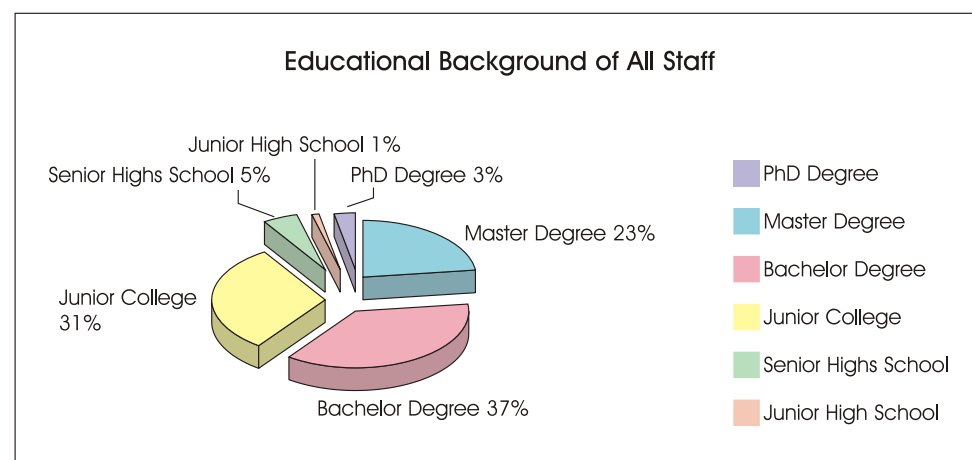
There were 54 officers, 27 research staffs, 20 senior contract employees, 23 junior employees and 22 maintenance workers for a total of 146 members employed by the museum.

### (3) Educational Background

#### 1. All Staff

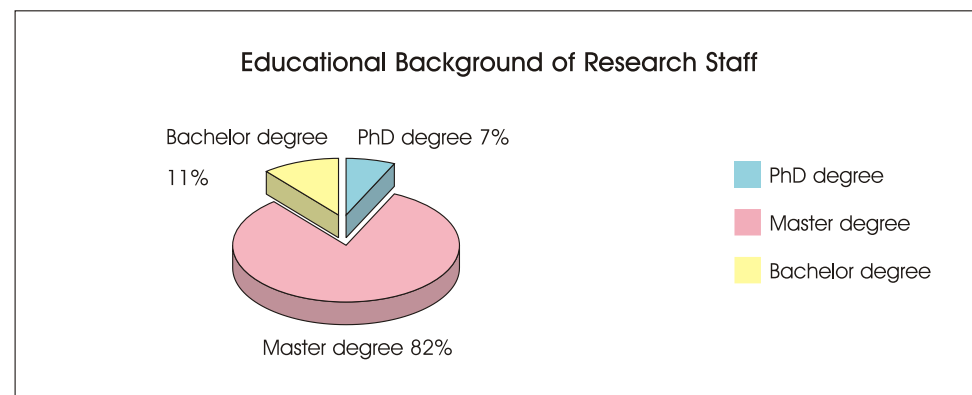
There were 4 members with Ph.D. degrees, 34 had earned their Master's degrees and 53 had Bachelor's degrees; and 45 members graduated from junior colleges, 8 from senior high schools and 2 from junior high schools.





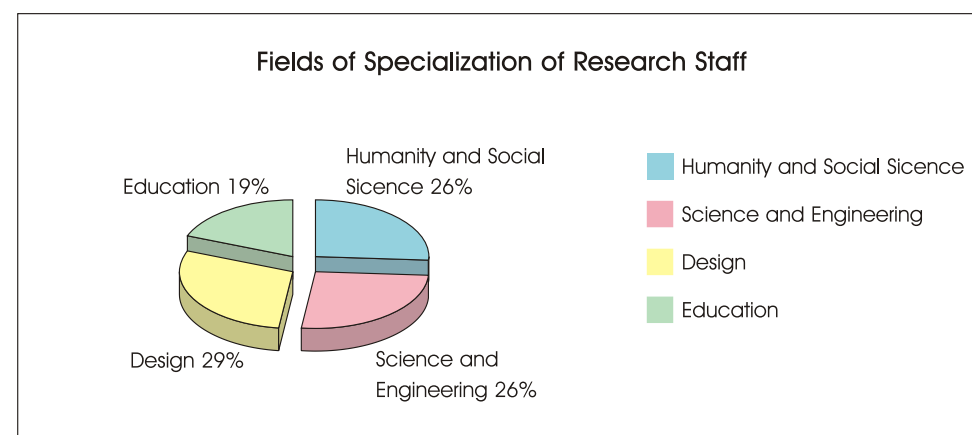
## 2. Research Staff

There were 27 research staff, including 2 with Ph.D. degrees, 22 with Master's degrees, and 3 with Bachelor's degrees.



## 3. Fields of Specialization (for the research staff)

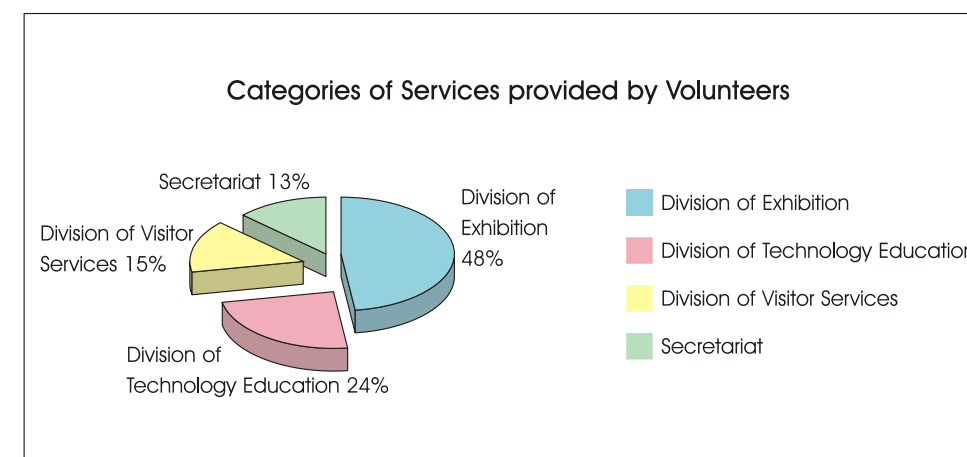
There were 7 research staff specializing in humanity and social science, 7 in science and engineering, 8 in design, and 5 in education.



## (4) Participation of Volunteers

### 1. Categories of Services Provided by Volunteers

There were 774 volunteers in 2002; 370 of which were in the Exhibition Division, 183 in the Technology education Division, 119 in the Visitor Services Division, and 102 in the Secretariat that provided 17 different types of services.



### 2. Number of Volunteers over the Years



## II. Development Goals

1. Establish a comprehensive collection management policy, and acquire, purchase, and conserve scientific and technological collections.
2. Digitize the museum collections in order to enhance public access to museum collection.
3. Activate the museum exhibition by building a updated mechanism to proceed exhibition alteration gradually.
4. Incorporate school resources to develop educational programs and teaching materials related to education policy nowadays.
5. Enhance public services, capitalize the power of mass media and community resources, and establish a diversified marketing strategy to increase visitor rates.
6. Strengthen public security around the museum to create a high-quality visiting environment, and thus increase the quality of services.
7. Reinforce computerization of administration management and access to lifelong learning on the Internet.
8. Improve internet software and hardware in the museum to promote work efficiency.
9. Design a digitized library to provide the public with several types of news and educational material within the Internet database. Also, actively create a special book area for different research topics in the museum.
10. Strengthen cooperation and exchange among the museums and hold academic activities and speeches to upgrade the quality of research.

## III. Research Achievements

### 1. Research Achievements

The research production for this year included 42 journal papers, 5 conference papers, 25 research projects, 44 invited academic lectures, 25 publications, 4 symposiums and 49 lectures.

Research Achievements over the Years

| Year                      |           | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------------------|-----------|------|------|------|------|------|
| Type                      | Numbers   |      |      |      |      |      |
| Journal papers            |           | 28   | 31   | 38   | 31   | 42   |
| Conference papers         |           | 1    | 3    | 2    | 5    | 5    |
| Research projects         | Hosting   | 1    | 2    | 3    | 8    | 13   |
|                           | Assisting | 3    | 3    | 8    | 11   | 12   |
| Invited academic lectures |           | 1    | 16   | 3    | 9    | 44   |
| Publications              | Books     | 3    | 7    | 11   | 26   | 8    |
|                           | CD ROMs   | 1    | 0    | 2    | 1    | 3    |
|                           | Guides    | 0    | 3    | 4    | 2    | 2    |
|                           | Brochures | 2    | 5    | 5    | 8    | 5    |
|                           | Journals  | 6    | 6    | 6    | 7    | 7    |
| Symposiums                |           | 2    | 4    | 3    | 1    | 4    |
| Lectures                  |           | 51   | 42   | 50   | 30   | 49   |

### 2. Educational Training

In order to enhance the staff's professional capability as well as broaden academic interests, the museum launched 50 rounds of educational training for employees this year.

Educational Trainings over the Years

| Year   | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------|------|------|------|------|------|
| Number | 16   | 20   | 57   | 36   | 50   |

# IV. Performance

## 1. Collections and Research

### (1) Further Improvement on Collections and Research

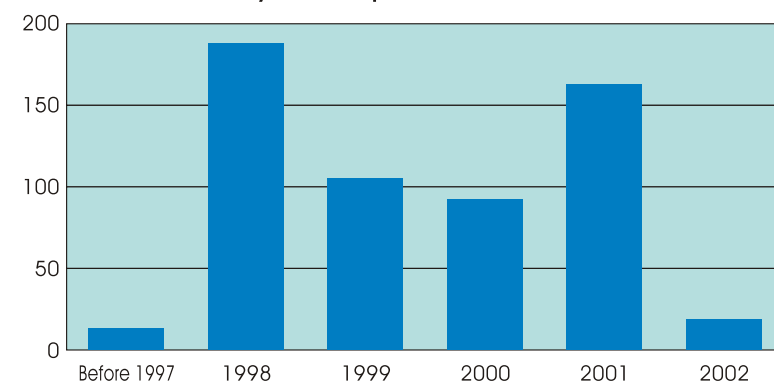
In response to the development of the museum and social changes, the museum has amended collection management policy and enhanced management of collections. Furthermore, the museum continued to acquire and purchase technological specimens and improve preventive preservation and conservation works.

There were 18 acquisitions this year including six printing specimens, one instrument, one textile machinery, one set of industry photography archives, and five others. The total were 577 acquisitions.

Quantity of Acquisitions over the Years

| Year   | before 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Total |
|--------|-------------|------|------|------|------|------|-------|
| Number | 13          | 186  | 104  | 93   | 163  | 18   | 577   |

Quantity of Acquisitions over the Years



For fulfilling the aim of phase developments and planned projects, the museum has amended the targets of museum acquisition, which are:

1. Specimens, materials or objects which are acquired by museum-planning exhibitions or relevant education projects.
2. The significant industrial heritage and materials which are endangered or being extinct due to political and economic changes.

3. Material witness and oral history records that are crucial to the development of Taiwan's technology and industries.
4. Based on the notion of "Collecting Today for Tomorrow," the specimens that represent interaction and issues among science, technology and society.
5. The industrial heritage and specimens collected from projects oriented industrial archaeological works.

### (2) Major Achievements

#### 1. The Conservation of Measurement Gauges Collection

This July, the museum invited Master Kui-Shan Huang to conserve measurement gauges collection which belonged to Taiwan Viceroy Office during Japanese governance period (1895-1945). Mr. Huang had more than 50 years experience in maintaining the gauges. He had acquired the ancient method to use cobwebs as the staid hairs in the aperture on theodolite. His skill is, in fact, a national heritage of this kind.



The Conservation of Measurement Gauges Collection

#### 2. Series Lectures on "Preserving Taiwan Industrial Past-the Preservation and Revival of Industrial Heritage"

In response to the World Heritage Day, the museum held lectures regarding the industrial heritages in order to increase the public's understanding in industrial heritage preservation. It is the first program of this kind in Taiwan. Starting from September 14 to December 21, 2002, there were totally 10 lectures with 1,069 participants.



Series Lectures on "Preserving Taiwan Industrial Past- the Preservation and Revival of Industrial heritage"

### 3. Symposium on "Science, Technology, and Society"

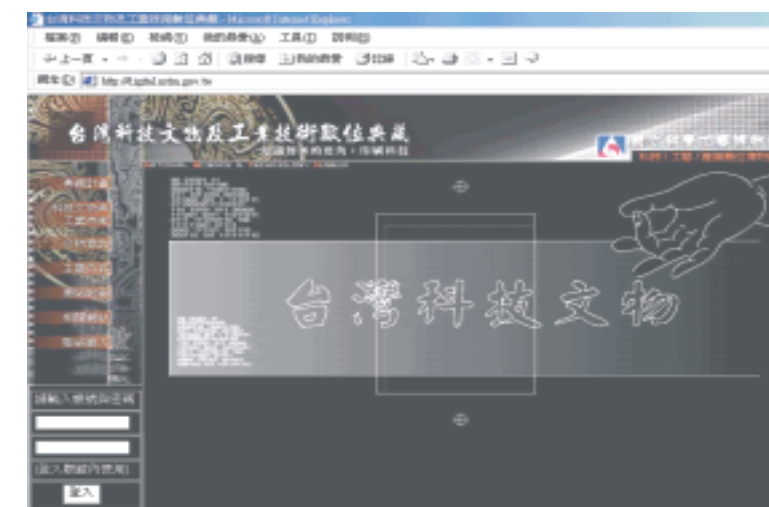
The symposium was held on March 21 and 22, 2002. More than 10 scholars in the STS field were invited to present papers and gave 10 speeches of special topics. The agenda of the symposium explored the history of science, technology and medicine in Taiwan. There were group and panel discussions on three issues, which were technological development and social changes, linking between the history of science and science education, and public health and the society.



STS Symposium

### 4. Five-Year Project on "Establishment and Promotion of Digital Museums of Taiwan's Industrial Heritage and Technology"

This plan was carried out by years in different phases. The first phase of this year was entitled "Establishment and Promotion of Digital Museums of Taiwan's Industrial Heritage and Industrial Technology-The Key to Knowledge Transmission: Printing." It was sponsored by National Science Council. There was also a website established exclusively for this plan which contained digital images of museum printing collection, and provided search function for printing collection and web tour by subjects, people and years as well as the theme of this website - a virtual exhibition about Taiwanese printing.



Five-Year Project on "Establishment and Promotion of Digital Museums of Taiwan's Industrial Heritage and Technology"

### 5. Organizing the Donation Ceremony of Weights and Measures for Bureau of Standards, Metrology and Inspection (BSMI), Ministry of Economic Affairs (MOEA)

The ceremony was held on November 25, 2002. The director-general of BSMI, Mr. Neng-Chung Lin, on behalf of MOEA, presented the historical weights and measures. These valuable objects, which covered 67 precious instruments of weights and measures such as copies of prototype standard meter and kilogram, and the balance used during Japanese Viceroy Office's governance of Taiwan.





Donation Ceremony of Weights and Measures for Bureau of Standards, Metrology and Inspection, MOEA

#### 6. Inter-museum Cooperation

The museum, in this year, undertook 5 projects with the following museums or associates, which were Taipei Astronomical Museum, Miniatures Museum of Taiwan, the British Council, Taiwan, National Museum of Marine Biology and Aquarium, and the National Museum of Nature Science.



## 2. Exhibition Planning and Operation of Theater

### (1) Strengthening Planning System of Special Exhibitions and Promoting the Quality of Exhibition.

This year, the museum held 16 special exhibitions including the exhibition "Taiwan Railway Festival" organized by our staff and 15 organized with other institutes. The museum also drafted "Organizing System for Special Exhibitions at the National Science and Technology Museum" and "Regulations for the Establishment of Exhibition Development Committee of the National Science and Technology Museum" in order to regulate the quality of special exhibitions and manage manpower efficiently.

**Special Exhibitions over the Years**

|              | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|------|------|------|------|------|
| By our staff | 0    | 0    | 4    | 4    | 1    |
| Join effort  | 4    | 3    | 10   | 5    | 15   |

### (2) Some Special Exhibitions

#### 1. Taiwan Railway Festival

This special exhibition was undertaken by our staff. It described the development process of Taiwan railways from perspectives of both technology and humanity in an easy-to-understand approach. The museum also organized a series of technology education activities, including lectures, educational activities, holiday at-scene activities, and mini-train riding. This exhibition kicked off from December 11, 2002 to August 31, 2003.



Taiwan Railway Festival

## 2. Fluorescent Genetically Modified Fish

The exhibition was undertaken by the museum and the TaiKong Corp. The exhibition displayed an aquarium of fluorescent genetically modified fish and related species as well as the biotechnology used to reproduce the fish. Issues like how the fluorescent techniques were applied in other fields and scientific observation and breeding of aquatic animals were also discussed. The exhibition was held from April 4, to September 1, 2002.



Fluorescent Genetically Modified Fish

## 3. Science Alive

The exhibition was undertaken by the museum and the British Council, in which the exhibits were designed and produced by the Science Museum London. Scientific theories regarding sound were presented. Visitors of all ages could have fun by operating the exhibits themselves. The exhibition was held from June 21 to August 11, 2002.



Science Alive

## 4. The Dream of Blue Sky - Exhibition of Educational Information of Air Pollution Prevention

The exhibition was undertaken by the museum and the Bureau of Environmental Protection of Kaohsiung Municipal Government. Kaohsiung citizens could understand better the quality of the air of their surroundings, air pollutants and relevant regulations through personal participation. The exhibition was held from September 28, 2002 to April 6, 2003.



The Dream of Blue Sky

## 5. Chinese Dinosaurs

The exhibition was undertaken mainly by the China Times with the assistance of the museum. The exhibits were precious fossils borrowed from four museums in China. "Back to Cretaceous period" was a 3-D movie specially selected in cooperation with the exhibition. The exhibition was held from July 5 to August 31, 2002.



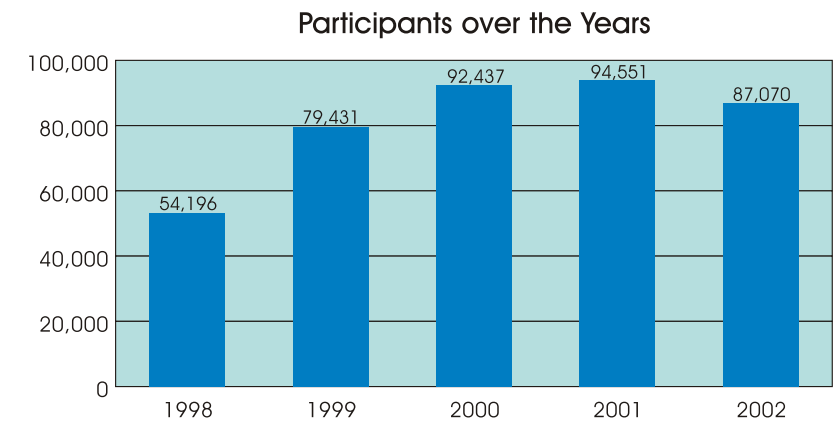
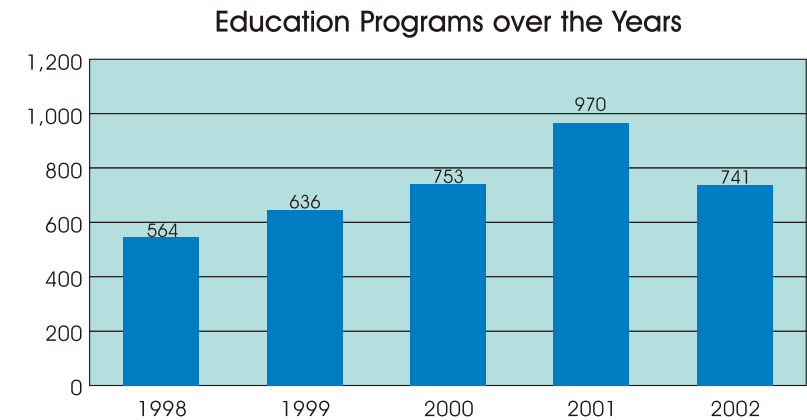
Chinese Dinosaurs



3. Promotion of Technology Education

(1) Various Educational Programs

In 2002, there were 741 scheduled programs and 87,070 people participated in those programs. Totally 28,614 members visited Family Rooms and Computers Labs.



(2) Major Programs

1. "2002 Science - Week Gene, Life Science and Biological Technology

This program was financially sponsored by the National Science Council and held from September 14 to 22, 2002. It included a special exhibition, science demonstrations, 13 DIY activities, and 20 lectures. There were 142,000 people participated in those activities. In the other hand, 163,000 participants in total were served by our science outreach programs.



Science Week

2. 2002 Social Education Institutes Lifelong Learning Festival - Bridging the Worlds

The festival was sponsored by the Ministry of Education. It was to widen the marketing range of the museum and attracted more visitors by cooperating with regional social education institutes. It included 40 activities and was held from May 18 to 26, 2002.



Lifelong Learning Festival - Bridging the World

3. National Senior High School Innovation Competition Using Superconductor for Magnetic Levitation

The competition was sponsored by the National Science Council and was held for first time since 2001. The competition in 2001 was undertaken by the museum, National Tsing Hua University, National Cheng Kung University, National Chi Nan

University and attracted worldwide attention, in which 663 teams participated with over 3,000 participants. The final 11 winning teams, including 1 championship, 3 runners-up, 5 second runners-up and 2 outstanding prizes, were selected on October 27, 2002.



National Senior High School Innovation competition  
Using Superconductor for Magnetic Levitation

4. 2002 International Robot Olympic Game

The activity was sponsored by the National Science Council, in which 50 teams and 200 contestants participated, including 22 junior high school and 28 elementary school teams. Four teams were selected as winners and participated in 2002 International Robot Olympic Game in Beijing on November 3, 2002. The pre-contest was held in May 18, 2002.



International Robot Olympia Game

5. Activity Themes for Family Rooms - "The Secret of Gravity" and "The world of Water and Sand"

"The secret of gravity" served kindergartners to systematically introduce gravity. From May to July, these activities served 52 school groups with 3,194 kindergartners and 3,978 individual visitors. "The world of water and sand" focusing on water scientific games with sand sculpting and bunkers created an atmosphere of happy summer, through which visitors learned about science and meanwhile, had fun. These activities were held from July to October served 45 school groups with 1,728 kindergartners, and 3,073 individual visitors in total.



Family Rooms activity



4. Public Affairs and Guided Tour Service

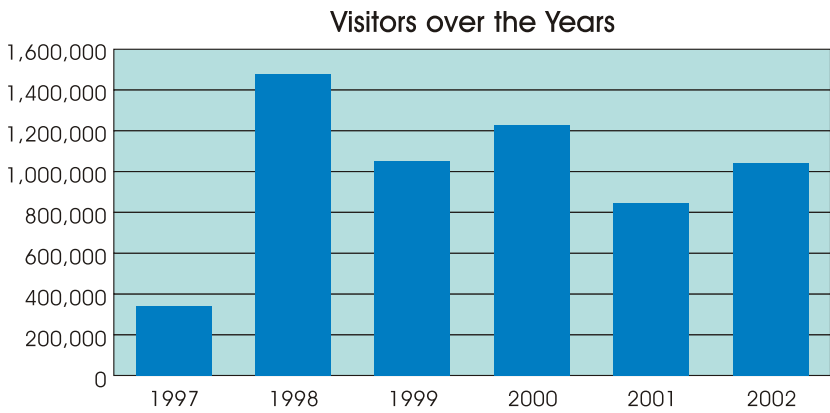
(1) Public Facilities and Service

In order to build an efficient interaction mechanism with the outside, the museum sought for other social resources to initiate different activities for the neighborhood. Different vocational education trainings and visiting tours were organized to improve work efficiency. Multi-aspects of marketing techniques were adopted to explore potential visitors.

There were 1,036,237 visitors in total this year.

Visitors over the Years

| Year | Exhibition halls | Theater | Multimedia world | Special exhibitions | Center of scientific education | Outdoor activities | Total number of visitors |
|------|------------------|---------|------------------|---------------------|--------------------------------|--------------------|--------------------------|
| 1997 | 271,323          | 43,622  | 0                | 17,607              | 8,841                          | 9,500              | 350,893                  |
| 1998 | 860,593          | 332,993 | 0                | 50,654              | 101,584                        | 134,992            | 1,480,816                |
| 1999 | 657,833          | 255,188 | 0                | 0                   | 114,135                        | 15,814             | 1,042,970                |
| 2000 | 659,409          | 241,108 | 8,653            | 156,480             | 107,908                        | 46,433             | 1,219,991                |
| 2001 | 460,152          | 168,313 | 16,610           | 1,925               | 107,653                        | 89,363             | 846,149                  |
| 2002 | 489,756          | 208,288 | 1,402            | 134,278             | 131,093                        | 71,420             | 1,036,237                |



(2) Major Achievement

1. Enrich Visiting Experience by Providing Activities like Orientation, Science Demonstration and Interpretation and so on.

Two programs of "Easy Walker - a trip to NSTM" were specially designed for the students from junior high schools to preschoolers by combining guided tours, movies, science demonstration and hands-on.

Participants in the Guided Tours

| Month        | Participants in the Mandarin guided tour | Participants in the English guided tour | Number of student groups | Participants in the scientific demonstration | Total number of participants |
|--------------|--|---|--------------------------|--|------------------------------|
| Jan.         | 202                                      | 0                                       | 5,761                    | 976  | 52,810                       |
| Feb.         | 1,394                                    | 0                                       | 2,133                    | 1,110  | 60,761                       |
| Mar.         | 1,508                                    | 70                                      | 7,020                    | 968  | 46,931                       |
| Apr.         | 5,701                                    | 0                                       | 17,093                   | 732  | 81,438                       |
| May          | 10,491                                   | 32                                      | 14,661                   | 323  | 82,853                       |
| Jun.         | 7,522                                    | 35                                      | 6,620                    | 1,429  | 63,328                       |
| Jul.         | 7,775                                    | 31                                      | 6,127                    | 1,168  | 186,366                      |
| Aug.         | 8,439                                    | 7                                       | 8,346                    | 1,199  | 172,895                      |
| Sep.         | 1,634                                    | 7                                       | 6,957                    | 739  | 65,095                       |
| Oct.         | 817                                      | 99                                      | 11,515                   | 622  | 68,663                       |
| Nov.         | 924                                      | 37                                      | 9,661                    | 930  | 93,130                       |
| Dec.         | 1,893                                    | 115                                     | 8,328                    | 472  | 61,967                       |
| Total number | 48,300                                   | 433                                     | 104,222                  | 10,668                                       | 1,036,237                    |

2. Developing Close Relationship with Schools and Enhancing Experience Exchanging

Internships were given to college or junior college students. College, vocational and junior high school students can also apply for internship in order to undertake community service. Students were given an opportunity to devote themselves to social service in free time. There were 534 intern students this year.

3. There were 121 marketing activities in this year. They were undertaken in cooperation with special exhibitions, major festivals and so on.

Marketing Activities

| Types of programs   | Special exhibitions | Festivals | Concerts | Exhibition seminars | Co-organized or assisted activities | Community movie preview | Community activities | Total number |
|---------------------|---------------------|-----------|----------|---------------------|-------------------------------------|-------------------------|----------------------|--------------|
| Numbers of programs | 13                  | 4         | 12       | 6                   | 61                                  | 6                       | 19                   | 121          |

#### 4. Building up a Better Interaction with Neighborhood Community

Community activities were held twice a year. With their IDs, the neighboring citizens can visit the museum exhibition areas for free. There were 25,648 neighboring citizens visiting the museum for free this year. And, There were 4,741 participants in the 19 movie preview programs.

#### 5. Utilizing the Resources of Mass Media to Extend Marketing Way

Information regarding the museum activities was provided to the public by press conferences, news broadcast and TV programs. It aimed to build up a good interrelation with the mass media and helped to improve the museum recognition. The museum was reported by the printed media for 522 times.

Printed Media Reports

| Months       | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Total number |
|--------------|------|------|------|------|-----|------|------|------|------|------|------|------|--------------|
| News-paper   | 22   | 63   | 50   | 27   | 39  | 51   | 73   | 57   | 36   | 13   | 29   | 47   | 507          |
| Magazines    | 1    | 1    | 1    | 1    | 1   | 2    | 1    | 1    | 1    | 1    | 2    | 2    | 15           |
| Total number | 23   | 64   | 51   | 28   | 40  | 53   | 74   | 58   | 37   | 14   | 31   | 49   | 522          |

#### 6. Providing Different Seminars and Discounts to Different Groups

In this year, 5 seminars of introducing the museum resources were held to the kindergarten directors, child care centers and cram schools in south Taiwan. There were 560 participants in sum. In addition, discounts were distributed to schools and travel agencies, such as: "2002 Science Week Discount", "The Blue Fantasy Discount", "Internet Discount", "Travel Agency Discount" and "Harbor Vacation Passport".

#### 7. Science Demonstration and Hands-on

There were 619 programs of science demonstration and hands-on in this year.

Science Demonstration and Hands-on over the years

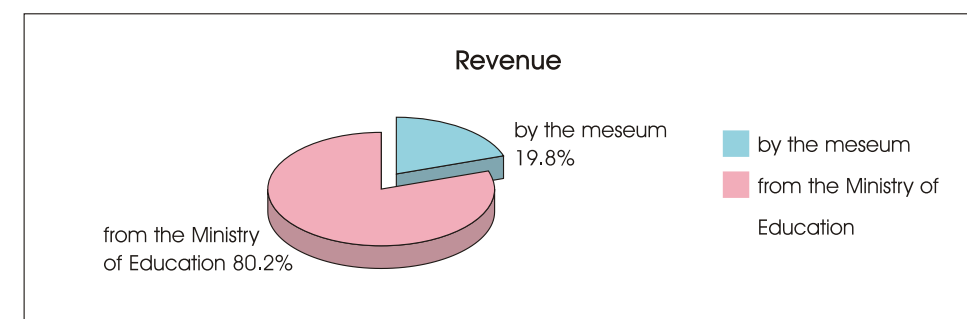
| year               | 1999 | 2000 | 2001 | 2002 |
|--------------------|------|------|------|------|
| Scheduled programs | 135  | 269  | 308  | 619  |

## V. Budget Management

### 1. Revenue

The revenue of Year 2002 totaled NT\$ 359,981,000 including the following two parts.

- (1) The operating budget NT\$288,824,000 was appropriated by the Ministry of Education. It included NT\$ 196,972,000 for administration, NT\$34,933,000 for exhibition, NT\$17,130,000 for public affairs and guided tours, NT\$11,831,000 for library management and information processing, NT\$19,188,000 for education promotion, NT\$8,770,000 for collection and research.
- (2) The museum generated the total revenue NT\$ 71,157,000 for the year. It included NT\$572,000 from compensations, NT\$49,000 from supply revenue, NT\$29,474,000 from admission fees, NT\$12,972,000 from rental and NT\$ 801,000 from miscellaneous revenues, subsidies NT\$20,745,000 and NT\$6,544,000 from material fees for education activities.



### 2. Expenses

The expenses of Year 2002 totaled NT\$ 359,981,000 including the following two parts.

- (1) The operating expenses reached NT\$316,113,000. It included NT\$ 196,972,000 for administration, NT\$34,933,000 for exhibition, NT\$17,130,000 for public affairs and guided tours, NT\$11,831,000 for library management and information processing, NT\$19,188,000 for education promotion, NT\$8,770,000 for collection and research subsidies NT\$20,745,000 and NT\$6,544,000 from material fees for education activities.
- (2) A portion of the revenue generation NT\$ 43,868,000 mentioned above was returned to the Government as required. It included NT\$572,000 from compensations, NT\$49,000 from supply revenue, NT\$29,474,000 from admission fees, NT\$12,972,000 from rental and NT\$ 801,000 from miscellaneous revenues.

VI. Future Prospects

The museum is in an outstanding location, and has outstanding human resources and information technology for its potential position among world famous museums. We plan to renew four to six permanent exhibition halls in five years. We also plan to hold entertaining and educational exhibitions as well as science/technology education activities with social resources. A mechanism regarding the cooperation between the researchers in the museum and others from institutes of all kinds will be developed. All of the above will enable the museum to be efficient in terms of collection, research, exhibition, and education.

In terms of space hardware improvement, the lobby will be modified with the unification of human resources and a single information desk, which will provide visitors with general information, tickets and so on. Aside from the group of volunteers, professors from colleges or universities in southern Taiwan are invited to be museum councilors in order to broaden the system of academic supports. Counseling in the exhibition hall and student guided tours are offered. Moreover, outstanding students are recruited to conduct the student-guided tour and devote their expertise.

An effort will be dedicated to explore more promotion methods and promote marketing activities to attract a variety of visitors. The museum will hopefully be fully taken advantage of and will promote national popular science/technology education and preserve the Taiwan industry, technology development, and heritage.

Appendix Significant Events

| Date       | Summary   |
|------------|---|
| 2002.02.10 | Participation in the third Science Center World Congress ( Canberra, Australia ) ;"Air and Water" was presented in the conference.                  |
| 2002.03.01 | Director general Yih-Yung Hsieh retired.  |
| 2002.03.12 | The Robot Exploration hall was established.   |
| 2002.03.15 | The travelling exhibition of "Human Wisdom - Nobel Prize 100 Years" was opened in Kinmen.   |
| 2002.03.21 | "Science, Technology and Society " Symposium was held.  |
| 2002.04.04 | The exhibition of "In Search of the Sparking Pearl - the Season of Biotechnology" was opened. ( in cooperation with TaiKong Corporation )           |
| 2002.04.05 | The exhibition of "Blocks - Sense and Sensibility" was opened. ( In cooperation with Mr. Wu, Kuan-ying )  |
| 2002.04.13 | National Senior High School Innovation Competition Using Superconductor For Magnetic Levitation was held. ( Sponsored by National Science Council ) |
| 2002.04.21 | The exhibition of "2002 Textiles and Clothing of E-generation" was opened. ( In cooperation with Shu Te University )                                |
| 2002.05.01 | The travelling exhibition of "Human Wisdom - Nobel Prize 100 Years" was opened in National Taiwan Science Education Centre.                         |
| 2002.05.02 | Seminars of "Kindergarten, Child Care Center and Bushian and The museum." were held.  |
| 2002.05.18 | "2002 Lifelong Learning Festival" and relevant Activities were opened. ( Instructed by the Ministry of Education )                                  |
| 2002.05.18 | "2002 international Robot Olympic Game" took place in the museum.   |
| 2002.05.29 | Professor Hong-Sen Yan from National Cheng Kung University was inaugurated as director general.   |

| Date       | Summary   |
|------------|---|
| 2002.06.21 | The Exhibition of "Science Alive" was opened. ( In cooperation with the British council and Delta Electronics Foundation )  |
| 2002.07.04 | The exhibition of "Chinese Dinosaurs", was opened. ( In cooperation with the China Times )  |
| 2002.07.06 | Dr. Paul Ching-Wu Chu - academician, Academia Sinica, and president, Hong Kong University of Science and Technology - visited the museum.   |
| 2002.07.28 | "The Season of Family Learning" was opened. ( Instructed by the Ministry of Education )   |
| 2002.08.10 | The exhibition of "The Wonder of Miniature" was opened. (In cooperation with the Miniatures Museum of Taiwan )  |
| 2002.09.01 | "The Representation and Discussion of STS - an sample study of NSTM" project was subsidized by the Ministry of Education.   |
| 2002.09.13 | "The Workshop of STS and NSTM" was held.  |
| 2002.09.14 | "2002 Science Week - Genes, Biotechnology and Biological Techniques" was opened.  |
| 2002.09.20 | The exhibition of "Application of Differentiating Counterfeit Note" was opened. ( In cooperation with National Kaohsiung First University of Technology )   |
| 2002.09.21 | Series Lectures on "Preserving Taiwan Industrial Past-the Preservation and Revival of Industrial heritage" was held.  |
| 2002.09.28 | The exhibition of "The Dream of Blue Sky"was opened. ( In cooperation with Environmental Protection Bureau, Kaohsiung Municipal Government )  |
| 2002.10.04 | The Technology Education Division was moved from the South Complex to the second floor in the Exhibition Hall. The library and audio-visual library were moved from the third and second floor in the North Complex to the South Complex. The exhibition designers moved from the basement to the third floor in the North Complex. |
| 2002.10.12 | 3,900 overseas Chinese visited the museum.  |

| Date       | Summary  |
|------------|--|
| 2002.10.27 | "2001 National High School Student Innovation Competition Using Superconductor for Magnetic Levitation" was held.  |
| 2002.11.09 | "NSTM newsletter" changed its Chinese title.   |
| 2002.11.16 | The exhibition of "Water Protection and Humanity and Technology Education in south Taiwan" was opened. ( in cooperation with Candied Gourd Foundation and National Taipei University of Technology ) |
| 2002.11.25 | Bureau of Standards, Metrology and Inspection of MOEA donated metrology facilities to the museum.  |
| 2002.11.26 | The exhibition of "Journey of Man" was opened. ( In cooperation with National Geographic )   |
| 2002.12.06 | The exhibition of "Great People in Centuries - Einston" was opened. ( In cooperation with the Israel Economic and Cultural office in Taipei )  |
| 2002.12.11 | The exhibition of "Taiwan Railway Festival" was opened.  |
| 2002.12.24 | "The Roundtable Seminars of Object Research" was held for researchers in the museum.   |

# Annual Report *2002*

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