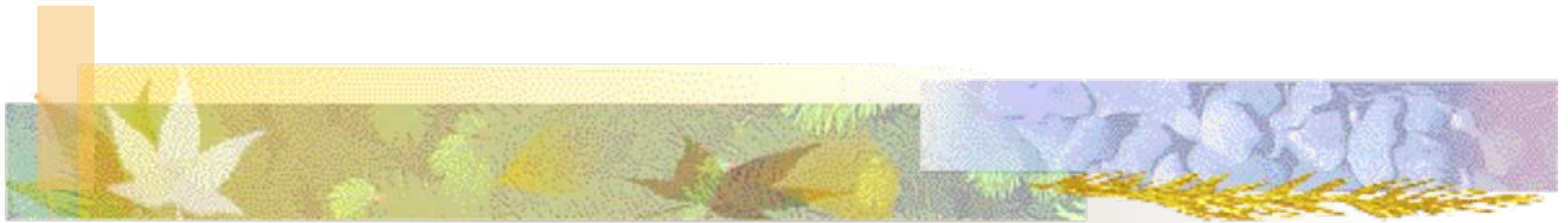


Retrospect and Prospect of China's web-based Public Science Education



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Retrospect and Prospect of China's web-based Public Science Education

- Background
- Course of Development
- Current Status
- Cooperation



The emergence and spread of Internet has greatly promoted the scientific research and education

- On March 2, 1993, a 64K leased line built by the Institute of High Energy Physics, CAS was successfully connected to the Stanford Linear Accelerator Center (SLAC) through an international satellite communication channel rented from AT&T. Hundreds of Chinese scientists were able to use e-mails through dial-up accounts since then.
- On April 20, 1994, NCFC Project (later CSTNet) opened a 64K international leased line to the Internet through a U.S. company. China began to have full functional International accessibility and was recognized as the 77 member state of the big Internet family.
- On May 15, 1994, CAS set up China's first web server and made the first set of web pages. One column of "Windows of China" provided information on science and technology.
- In January 1996, CHINANET backbone network completed its construction and began to provide service to millions of families. The Internet users in China amounted 2000 at that time.



Course of Development

- 3 stages of the development of web-based public science education
- 1996-1999, the beginning stage
- 2000-2002, the rising stage
- 2003-2004, construction for famous brands and large-scale production



1996-1999, the beginning stage

- On December 31, 1998, China's Internet users were counted as 2,100,000; “.cn” domain names as 18,396; websites as 5,300. The increasing Internet users need authorized and authentic information on science.
- Before 1999, China only had science channels in several commercial websites yet no specialized website for public science education.
- From 1999, sponsored by organizations like MOST, CAST and CAS, China began to establish specialized websites for public science education.
 - Some personal web pages began to provide info on science.
 - Commercial websites began to seek for business opportunity.



Our Choice

- ❖ **Virtual Science Museums of China (VSMC)**
<http://www.kepu.net.cn>
 - ❖ Based on the resources accumulated in “Scientific Database Project”
 - ❖ Released contents with Chinese characteristics
 - ❖ Emphasized the contents to be scientific, systematic, creative, authentic and easy to understand
 - ❖ Made use of latest IT technology, like the multimedia (Video/audio/motion pictures/pictures/images)
 - ❖ Established interactive platforms for scientists and the public with the “Interactive Internet”

VSMC was opened to the public on October 25, 1999



The first version



Opening Ceremony



2000-2002, the rising stage

- Numbers of websites for public science education emerged
 - Non-profit websites for the public
 - Commercial websites
 - Personal websites
- In November, 2000, International Forum for Science Communication. The power of “web-based sciences education” drew attention of leaders and publics for the first time.
- Chinese government attached greater importance to public science education
 - Approved by the State Council, the third week of May were selected as the “Week for Science and Technology” since 2001, when series of activities on science and technology would be held for the public.
 - On June 19, 2002, China issued the Law for Public Science Education.

Typical websites for public science education

- Non-profit websites for the public
 - VSMC (<http://www.kepu.net.cn>) , supported by CAS
 - China Public Understanding of Science, supported by MOST (<http://www.cpus.gov.cn>)
 - China Public Net for Science and Technology , Supported by CAST (<http://www.cpst.net.cn>)
 - Beijing Windows for Public Science Education (<http://www.bjkgp.gov.cn>)
 - Jointly built by Beijing Association for Science and Technology and the Informatization Office of Beijing Government
 - On-line Science Museums (<http://www.inetsm.com.cn>)
 - Built by Guangdong Association for Science and Technology
- Characteristics : authorized, scientific, systematic



Typical websites for public science education

- Commercial websites
 - Science Space of Tom (<http://www.scitom.com.cn>)
 - China Science and Technology City (<http://www.stcity.net.cn>)
 - Science Channel of NetEase (<http://science.163.com>)
 - Net for the next generation (<http://www.xiayidai.com>)
 - CosmoScape (<http://www.cosmoscape.com>)
- Characteristics of commercial websites
 - Practical, commercial, catch eyes



Typical websites for public science education

- Personal websites
 - Eyes looking into Science and Technology
(<http://www.eyecn.com>)
 - Built and maintained by a group of volunteer teachers
 - Wuliu Village for Science and Chinese Culture
(<http://go.163.com/~sltao>)
 - Built and maintained by Mr. Tao Shilong
 - Chemistry Club (<http://chemclub.3322.net>)
- Characteristics of the personal websites
 - Focus on one specific topic based on personal interest
 - Casual choice for contents

Second version of VSMC

The screenshot shows the second version of the VSMC website in Microsoft Internet Explorer. The browser title is "中国科普博览 - Microsoft Internet Explorer". The address bar shows the website URL. The page features a navigation bar with "English" and "简体中文" buttons, and a main menu with icons for "中", "科", "博", and "览". The main content area is titled "新馆介绍" (New Exhibition Introduction) and includes a login form on the left, a central text block with a "精彩聚焦" (Spotlight) section, and a "快速传递" (Quick Transfer) section at the bottom. The "精彩聚焦" section lists several topics, including "空气从哪来" (Where does air come from?) and "世界海龟有多少" (How many sea turtles are there in the world?).

中国科普博览 - Microsoft Internet Explorer

文件(F) 编辑(E) 查看(V) 收藏(A) 工具(T) 帮助(H)

CHINA POPULAR SCIENCE EXHIBITION

English 简体中文

中 科 博 览

用户名

密码

新用户注册 登录

关键词

搜索

science

设为首页

站点地图

科普导航

版权声明

新馆介绍

长风破浪会有时，直挂云帆济沧海，曾是
多少儿时梦想。如今终于有机会可以融入
海的怀抱，结识海的儿女，承受海的恩泽，保
护海的家园，你能把握吗？来吧！让我们一起
扬帆起航，融入海洋博物馆...

- 海洋与陆地的区别
- 大陆漂移的证据
- 郑和七次下西洋
- 风光旖旎的珊瑚岛
- 晶莹剔透的腔肠动物
- 海洋生物圈
- 化学元素的故乡
- 海岸线不是一条线
- 海洋保护区的兴起
- 古龙颈的跨行动物

【更多】

精彩聚焦

- 空气从哪来
- 世界海龟有多少
- 真假珊瑚枯叶蝶
- 采石场的大推挤
- 令人讨厌的偷渡猪
- 受保护的海中大象
- 最早的植物学著作
- 大峡谷里挖薯香
- 何时去户外滑冰
- 恐龙的后代在哪里

【更多】

快速传递

热点话题

First mirror site opened



On April 1, 2000, the first mirror site of VSMC was set up in Taiwan, China.

NSF Delegation visited CNIC



Discuss and exchange ideas on topics like web-based
Public science education



VSMC receives support from -

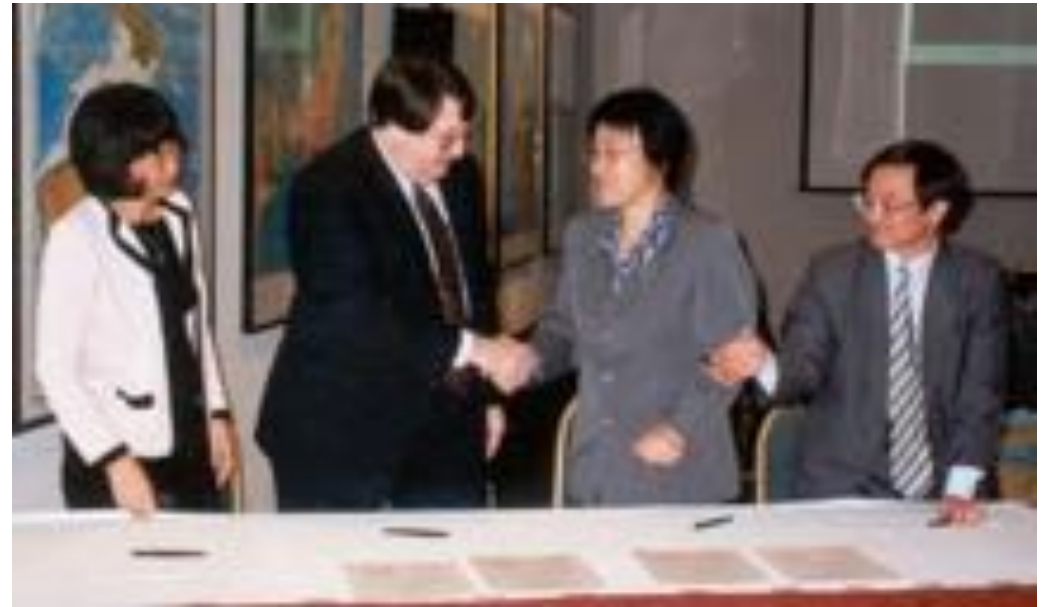
■ NSFC

- Special project for public science education- Virtual Science Museums
- Project of International collaboration; VSMC Delegation's visit to the U.S.

■ CAS

- Special project in the 10th Five Year Plan

Go abroad



A MOU was signed between CNIC and TAMU for setting up VSMC's mirror site in North America and promoting the collaboration on public science education.



2003-2004, construction for famous brands and large-scale production

- Internet users begin to choose among bunches of information on the Internet
- Government call on the public to use Internet in a proper way
- Share Information Resources with each other
- Working on the next five-year plan

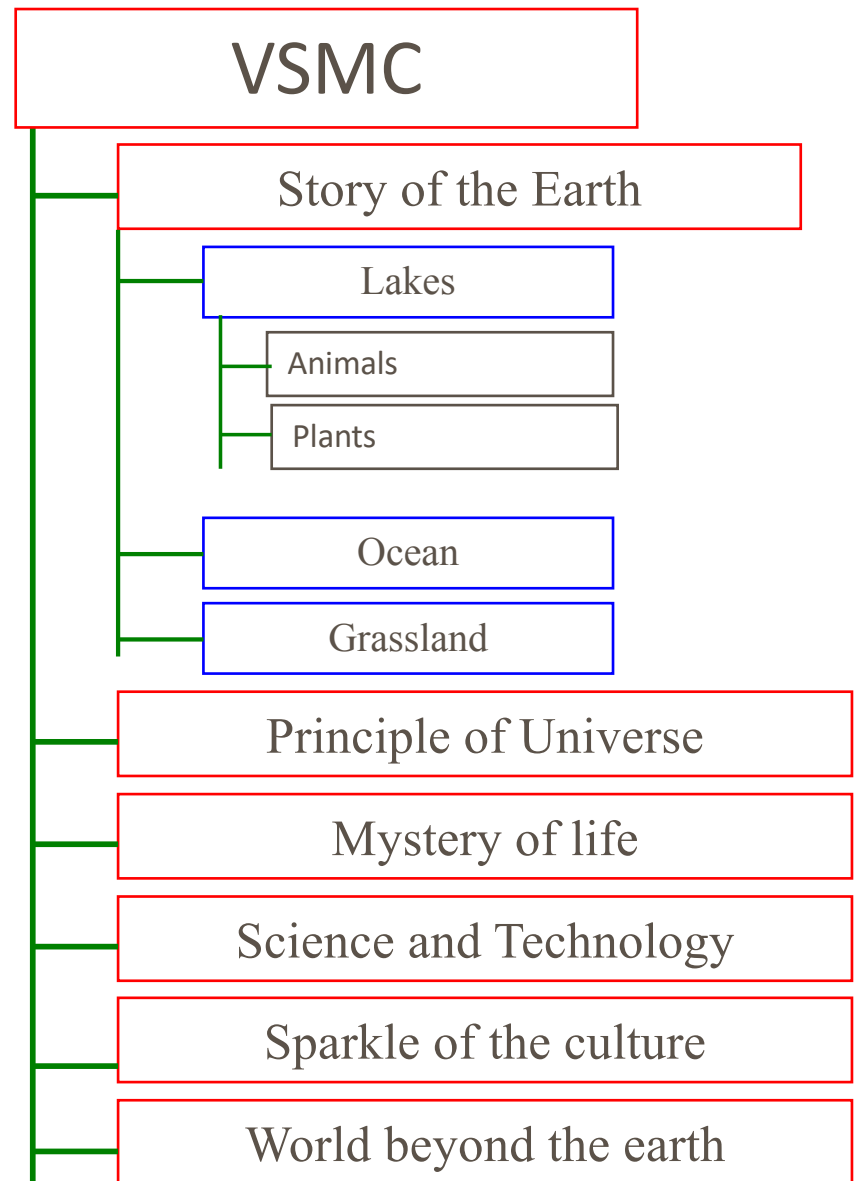


Retrospect

- Looking back to the past 5 year, China's web-based public science education has made a considerable progress through trials and hardships.

Content Structure

- 6 Exhibition Areas; 71 museums





Characteristics of contents

- Abundant
 - 71 museums, including 10 in English
 - About 30 GB/ 38000 web pages / 60000 pictures
 - Based on the scientific databases of CAS (313 scientific databases, 8.2TB)
- Unique
 - With Chinese characteristics (Animals in Yunnan, Giant Panda, the Grand Canon...)
 - English version for foreigners
- Authorized
 - Raw data from scientists

Advantage of CAS for resources and talented people

- Over 100 CAS institutes throughout the country, more than 40,000 scientists and researchers; a large amount of data accumulated in the past years

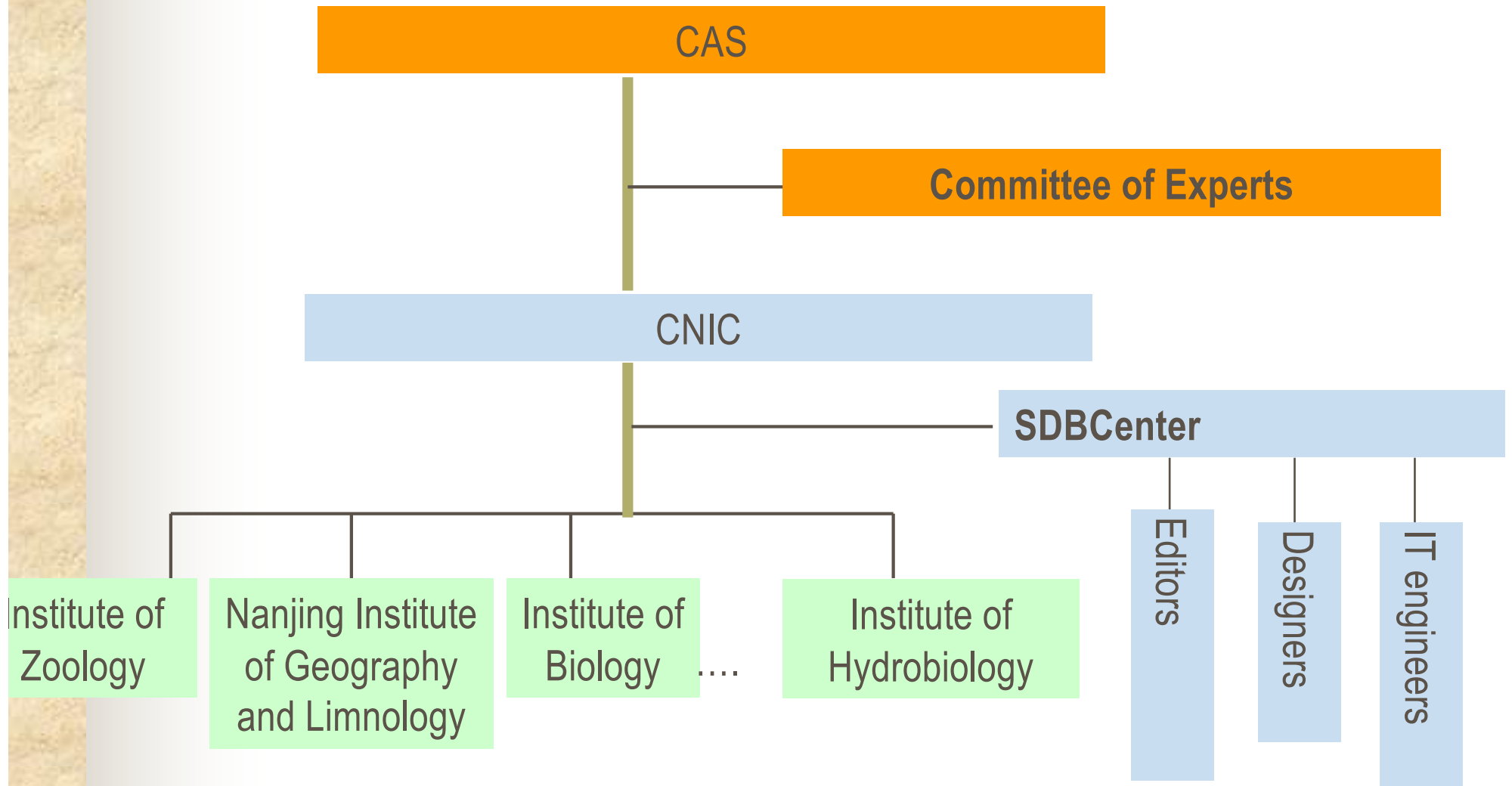


Network platform with CSTNet

- CSTNet
 - China's first net connected with the Internet
 - Provide service for scientists and researchers
 - Connect into over 1000 institutes
 - About 1 million end-users
 - International bandwidth 620M.

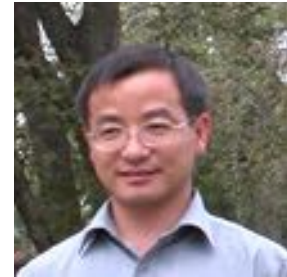


Organization



Team

- Scientists and experts: over 80
- Editors: 5 full-time, 4 part-time
- IT engineers: 8 full-time
- Designers: 2 full-time

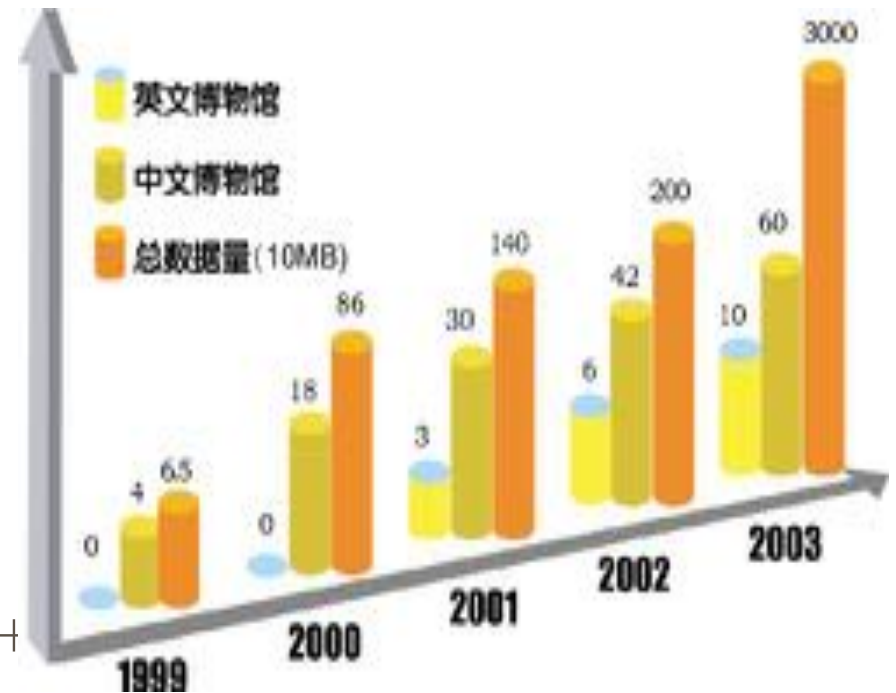


Collaboration

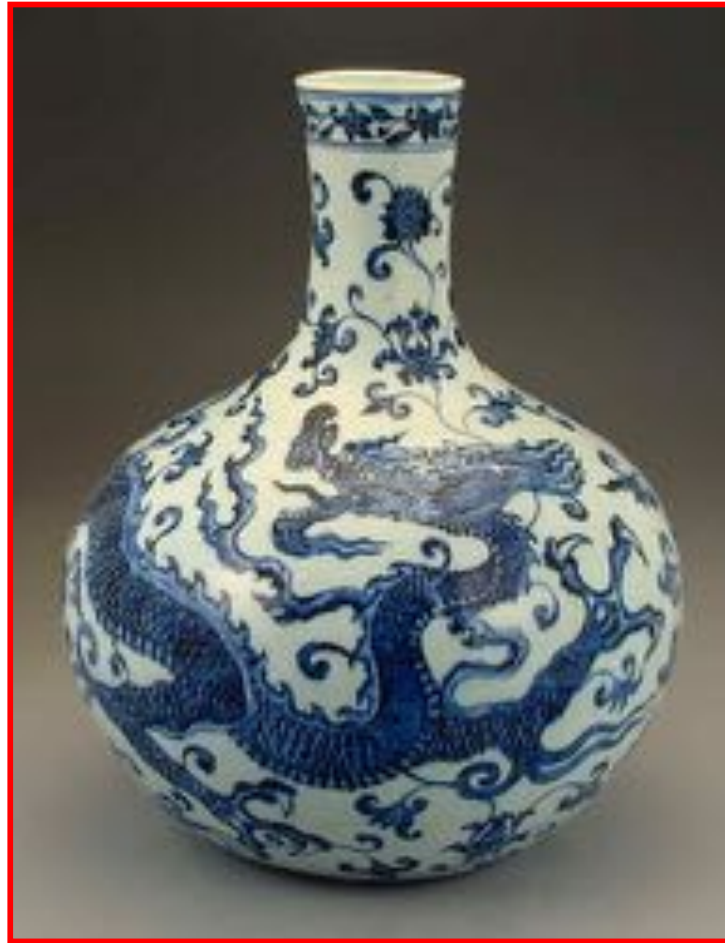


Information Volumn

- Pictures: 25000⁺
- html files: 25000⁺
- Multimedia: 500⁺
- Raw data: 300GB⁺
- Released data: 30GB⁺



Origin of Pottery



Plenty of multimedia files

The screenshot shows the 'Great Panda Cinema' (大熊猫影院) website. At the top, there is a red header with the logo of the Chinese Academy of Sciences (中国科学院) and the text '生命奥秘' (Mysteries of Life). Below this is a navigation bar with various icons representing different scientific fields. The main content area features a large green banner with the title '大熊猫影院' and a central image of a panda family. To the right of the banner is a list of featured content, including '大熊猫博物馆' (Great Panda Museum), '熊猫俱乐部' (Panda Club), and '熊猫生日' (Panda Birthday). Below the list, there are several links to related content, such as '生生不息——大熊猫' (Everlasting——Great Panda) and '熊猫音乐' (Panda Music). At the bottom, there is a note about downloading Windows Media Player 9.

中国科学院 生命奥秘

| 中外医药 | 微生物 | DNA | 以水为食 | 蘑菇 | 中国金鱼 | 水药 | 植物细胞 | 大生物 | 恐龙 | 植物 | 动物 | 水生生物 | 昆虫 |

大熊猫影院

- 大熊猫博物馆
- 熊猫俱乐部
- 熊猫生日

生生不息——大熊猫
熊猫音乐——大熊猫
熊猫生日——大熊猫
大熊猫繁育
大熊猫饲养员生活
大熊猫开放式饲养
大熊猫野外放养

如果看不到内容，请下载Windows Media Player 9 观看。

Virtual Ceramic City



Ceramic Games



Meet the demands of public—Manned Spaceship



The image shows a screenshot of a website with a red header. On the left is the logo of the Science Museum of China (中国科学院博物馆). To its right are the characters '星宇迷尘' (Stardust) and '微生物' (Microbiology). Below these are five small icons representing different scientific fields. On the far right of the header, there is a navigation menu with the text '载人航天 | 天文 | 航空 | 国际空间站 |' (Manned Spaceflight | Astronomy | Aviation | International Space Station |). The main content area features a large image of an astronaut in space above the Earth's horizon. Overlaid on this image is a dark green box containing the title '载人航天' (Manned Spaceflight) and the slogan '让我们摆脱地球引力飞行 Fly-Fly-Fly' (Let us escape Earth's gravity and fly Fly-Fly-Fly). At the bottom of the page, there is a footer with the following text: '关于我们 站点地图 版权声明 帮助信息' (About Us Site Map Copyright Statement Help Information), '版权所有：中国科学院计算机网络信息中心' (Copyright ©: Institute of Computer Network Information, Chinese Academy of Sciences), 'Mail: webmaster@kepu.net.cn', and 'Tel: 86-10-62580066'.

中国科学院博物馆 Science Museum of China 星宇迷尘 微生物

载人航天 | 天文 | 航空 | 国际空间站 |

载人航天

让我们摆脱地球引力飞行 Fly-Fly-Fly

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Mail: webmaster@kepu.net.cn
Tel: 86-10-62580066

Statistics

- Page views: 360,000⁺
- Users: 22,000⁺
- Total users reach up to **25,000,000**



Feedback from an expert

编辑同志：

你们网站使人耳目一新，原先见到一个科技博览网（没有中国二字）没有特色，这次是偶然发现的，没想到办得这样好。如果我年轻并在国内，真想参加你们的行列。你们照这样办下去不断充实内容，会成为一个很有影响的科普网站。北京市地质研究所单青生先生办有一个“地球的家园”，不知你们有联系没有，现在网站很多，但精神价值高的不多，宣传科学的尤其少，需要互相支持。我在这加拿大设置的个人网页中，有一些普及科学的内容，另外发去供参阅并请指教，你们大概是年轻人多，心灵手巧。接受新事物快，我是老牛破车了，比不上你们了，但还是要向前走。

祝你们成功！

陶世龙



Feedback from a foreigner

Very well done. Informative, well laid out and with fine illustrations. Thank you for providing others with the opportunity to learn and experience things that would be out of the reach under normal situations.

This is something that should be listed for education. Will recommend this site to teachers and other homeschoolers. I found your web site after a search looking for information about bananas and plantains. All your information is very educational. I intend to visit China one day, and your botanical gardens will be one of the places I will want to see.

Thank you,

Christian Rieger

Key West, Florida

7/23/2003 13:14:52

2004

- Awarded as “China’s most Excellent Cultural Website” by the Ministry of Culture



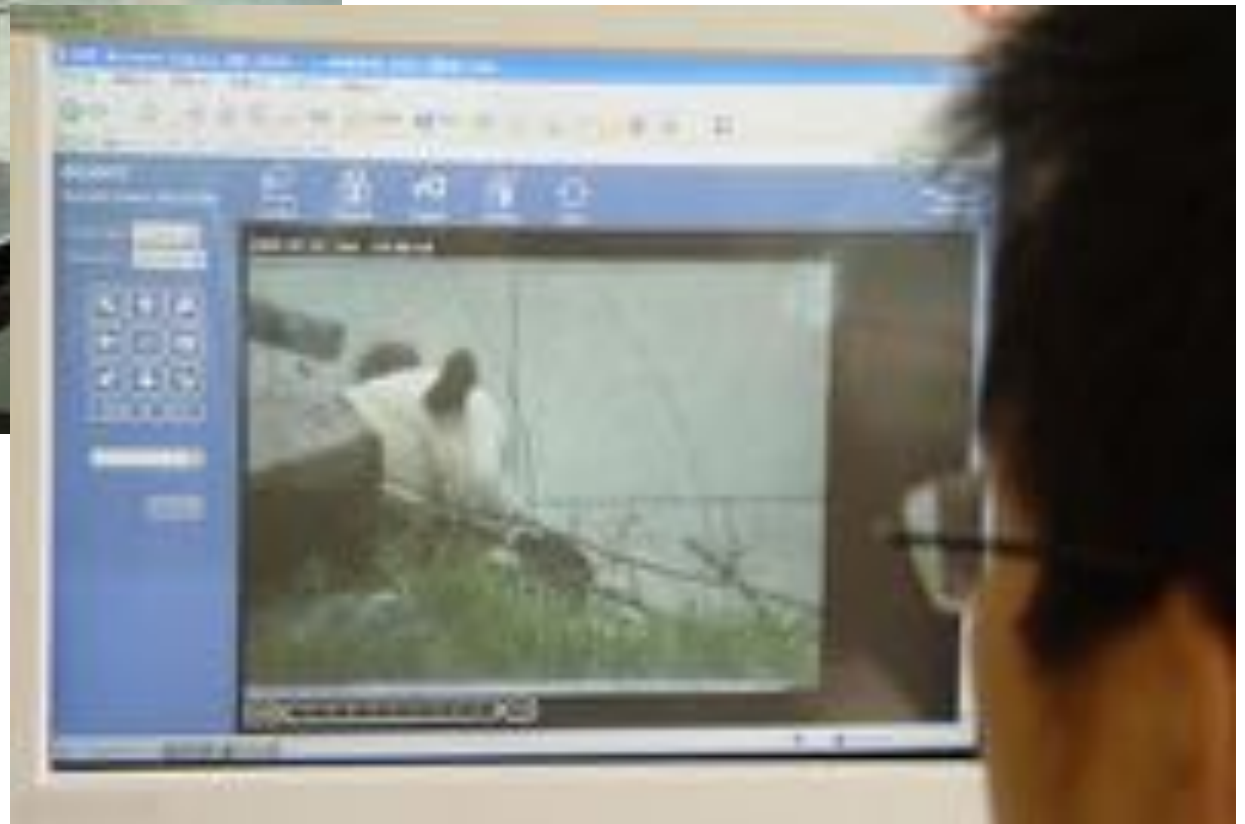


International collaboration

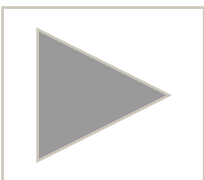
- New York Sesame Workshop
- Korea Institute of S&T Information
- Chatbot Space Science Center in San Francisco
- Texas A&M University

Web-Camera on Panda Time Lapse Video on Plant
Virtual Ecological Inquiry System

International collaboration
Wolong panda webcam with TAMU



International collaboration Children's Channel built with Sesame Workshop





Thank you!

<http://www.kepu.net.cn>