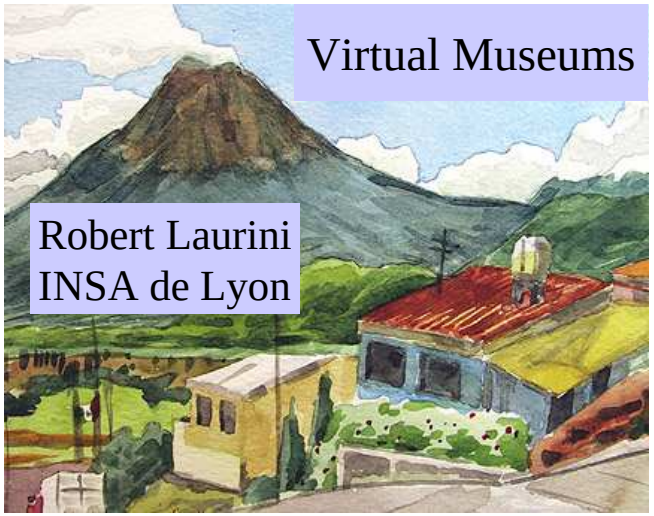


Virtual Museums

- Cultural heritage
- Real Museum (brick-and-mortar) and Virtual Museum
- Multimedia information

Virtual museums

- 1 - Websites of existing museums
- 2 - Gateways towards several museums
- 3 - Museums without walls
- 4 - Silk Road Virtual Museum
- 5 - Conclusions

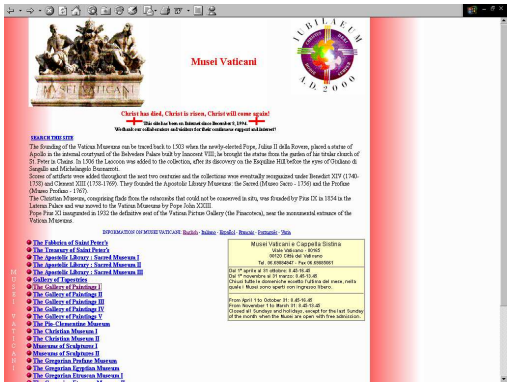
1 - Websites of existing museums

- Vatican
- Louvre in Paris
- Hermitage in St Petersburg
- Air and Space Museum in Washington DC
- Toyota
- Mutsibishi
- Ellis Island, NY

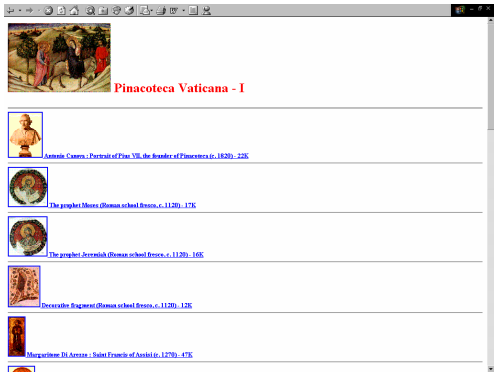
Vatican Museums

http://www.christusrex.org/www1/vaticano/0-Musei.html

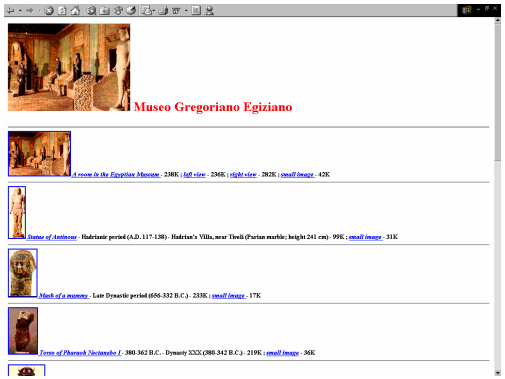
Portal



Example



Other example



Vatican museums

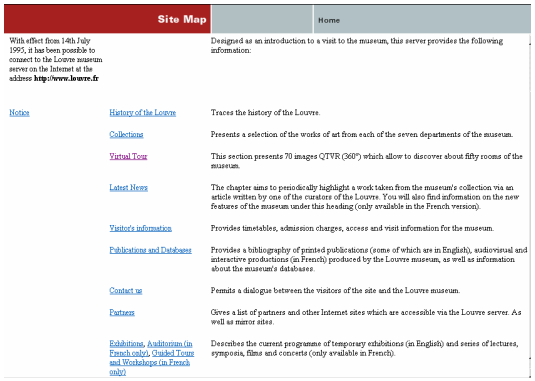
- One of the more accessed site
- Oldest virtual museum
- More than 60 awards
- Diversity of languages
- Simple structure
- No site map
- No search engine

Louvre

http://www.louvre.fr/

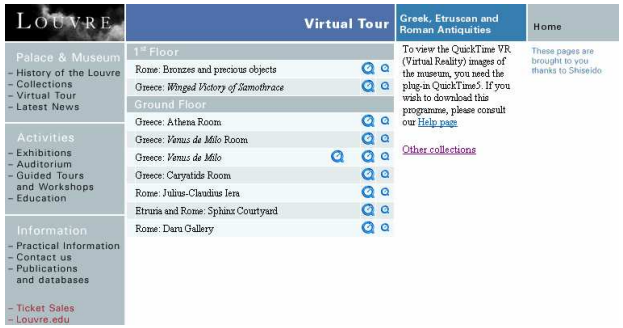
English portal

Louvre site map

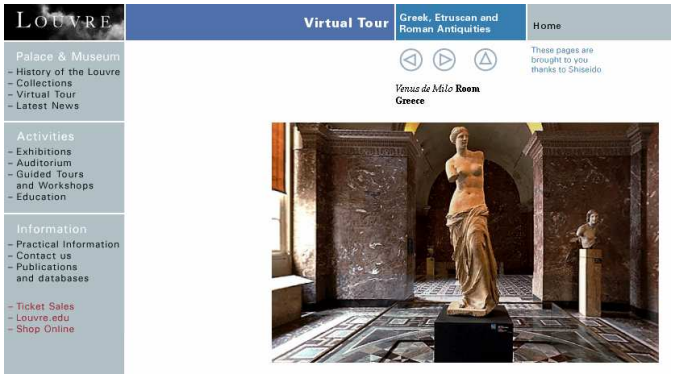


Louvre virtual tour

Louvre virtual tour



Louvre virtual Tour



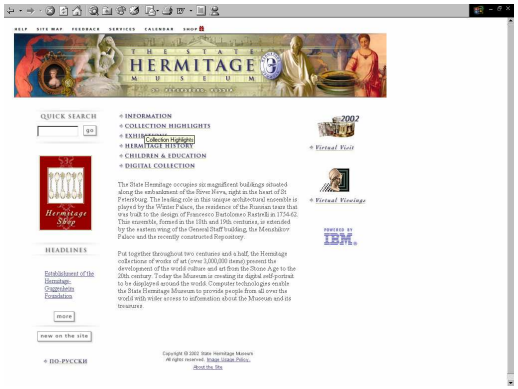
Louvre museum

- Structure more sophisticated
- Animation
- Virtual tour

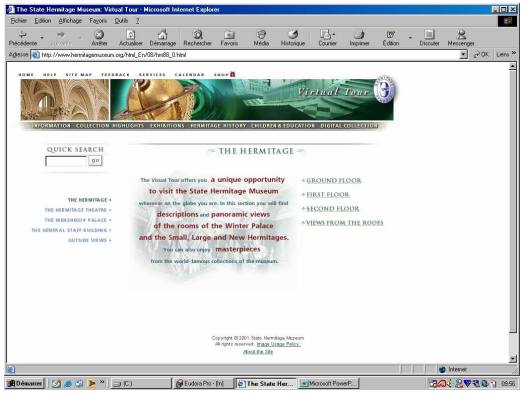
Hermitage

http://www.hermitagemuseum.org/

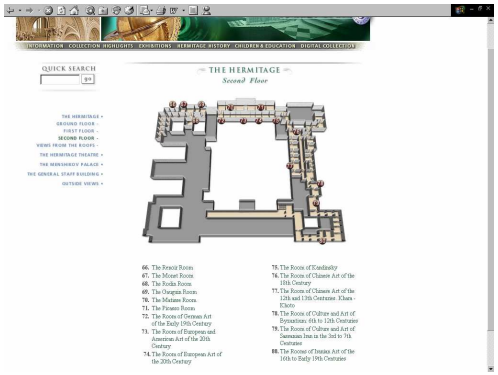
Portal

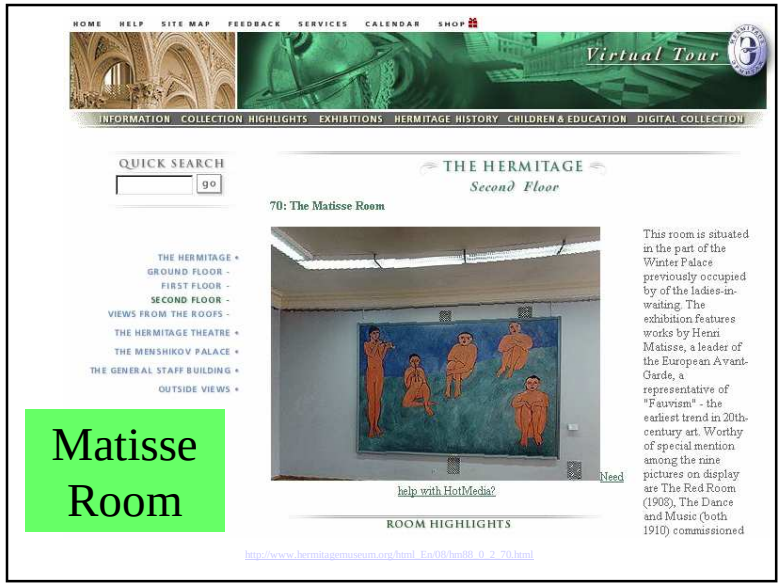


Virtual visit

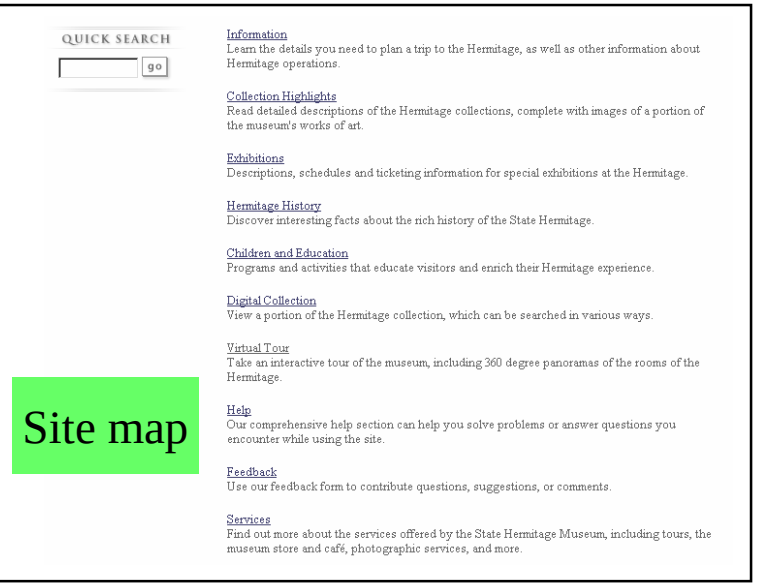


Second floor





Matisse Room



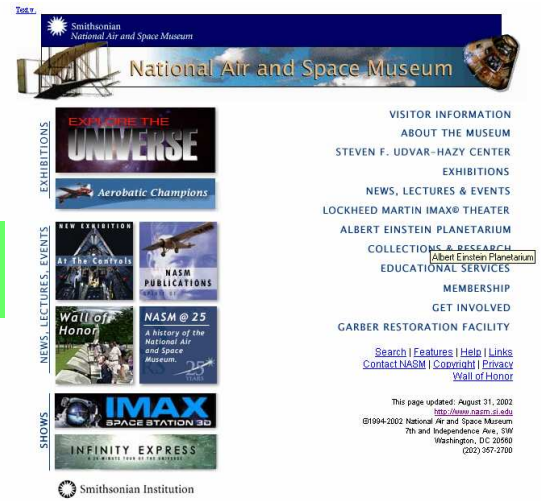
Site map

Digital collections

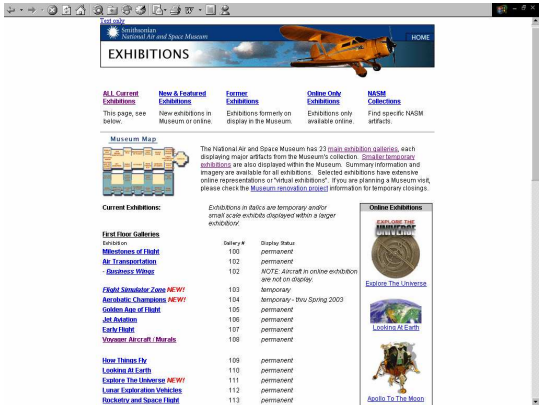
Washington Air and Space Museum

http://www.nasm.si.edu/

Portal



Exhibitions



Example: Apollo to the Moon

Early flights

Experience the early history of the airplane--from some of the earliest notions of flying, through the first decade of powered flight. This gallery evokes the mood and excitement of a time when wings were new by depicting a 1913 aeronautical trade show. The labels are written as if it were 1913, to give the visitor a sense of how the achievements of the Wright brothers and other innovators were first introduced to the public.

- Lilienthal Hang-Glider
- Langley Quarter-Scale Aerodrome
- Wright Military Flyer
- Curtiss Model D "Headless Pusher"
- Ecker Flying Boat
- Bleriot XI

Lilienthal Hang-Glider

132k GIF | 77k JPEG

Smithsonian Institution photograph by M. Avitto, do not use without written permission.

When Otto Lilienthal built his **"Lilienthal Hang-Glider"** in 1894, he considered it the safest and most successful of all his glider designs. In flight, the pilot hung between the wings by bars that passed beneath his arms. Lilienthal made glides of up to 1,150 feet (345 meters) in machines of this type. Despite Lilienthal's faith in the safety of his invention, he met his death following a crash in a hang-glider similar to the one on exhibit here. His efforts were not in vain, however, for two young men named Orville and Wilbur Wright read about Lilienthal's experiments and were inspired to tackle the problem of heavier-than-air flight themselves. In 1899, they wrote to the Smithsonian Institution for information about experiments that had been conducted up to that time.

Collections

AIRCRAFT

Aircraft of the Smithsonian (location, images & information for all NASM aircraft)
Aircraft on Display in the Museum (alphabetical list)
Aircraft on Display in the Museum (listed by exhibit gallery)
Aircraft on Display in the Museum - Imagery Index
Artifacts in the Attic (imagery of aircraft in storage or formerly on display)
*See Also NASM News and Events for press releases and special air related resources.

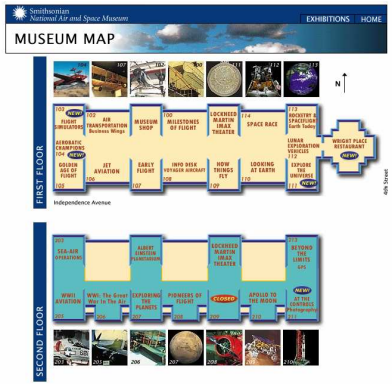
SPACE ARTIFACTS

Space History Division Artifact Collection
Major Space Artifacts on Display in the Museum (alphabetical list)
Major Space Artifacts on Display in the Museum (listed by exhibit gallery)
Artifacts in the Attic - (Imagery of some space artifacts in storage or formerly on display)
*See Also NASM News and Events for press releases and special space related resources.

IMAGERY & ARTWORK

NASM Archives Image Collections (NEW! Paper Prints available for ordering!)

Museum map



How things fly

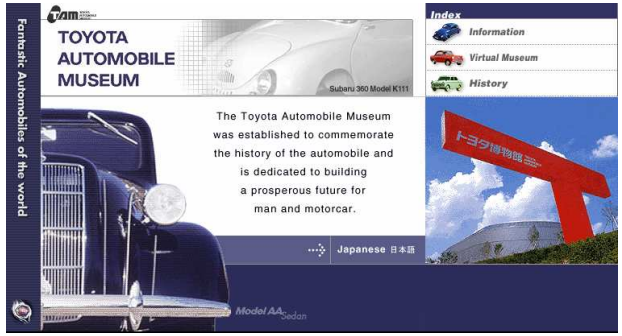
Air and Space Museum

- Interesting structure
- Enormous diversity
  - Need re-engineering

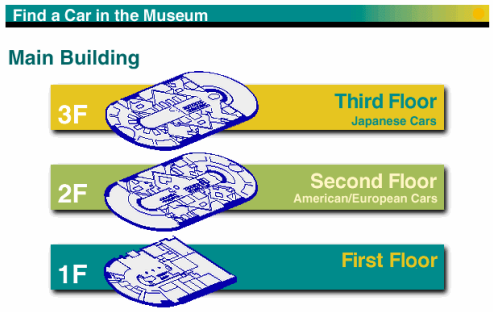
Toyota Automobile Museum

http://www.toyota.co.jp/Museum/index.html

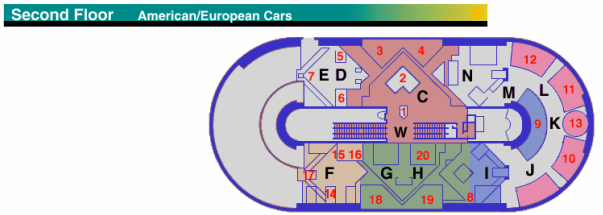
Portal



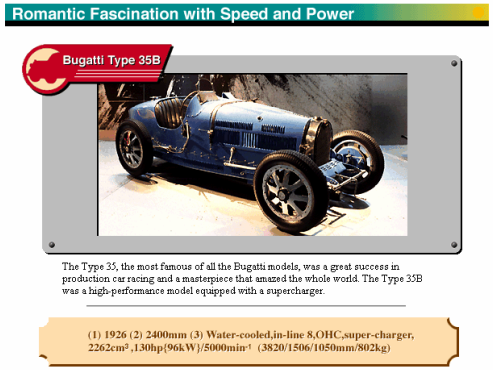
Organization of the museum



Organization of the second floor



Example



Toyota Museum

- Very simple structure
- Geographic organisation

Mitsubishi

http://www.mitsubishi.or.jp/vdm/nomal2_e.html

Comparison

- Selection of very common examples
- Not only presentation of collection, but also general information regarding the museum
- Limitation about virtual tour

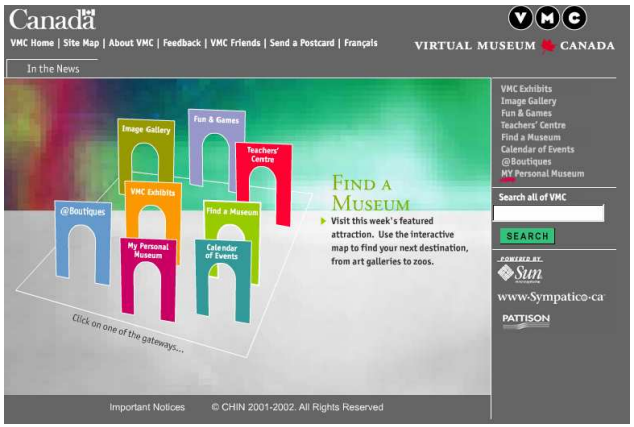
2 - Gateways towards several museums

- Example in Canada
- Example in Portugal
- Example in UK

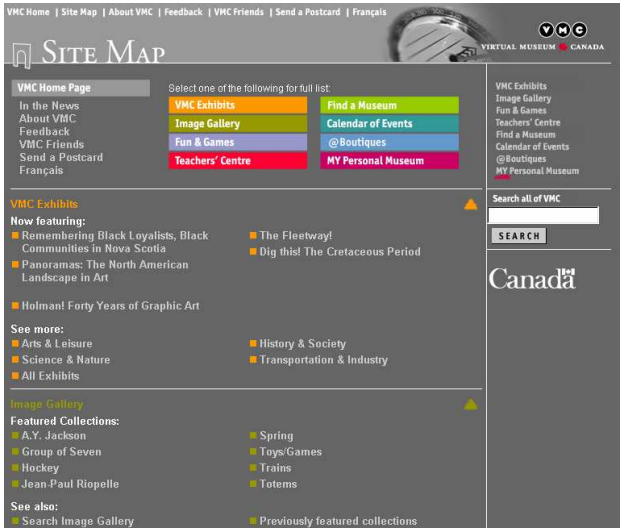
Virtual Museum of Canada

http://www.virtualmuseum.ca/

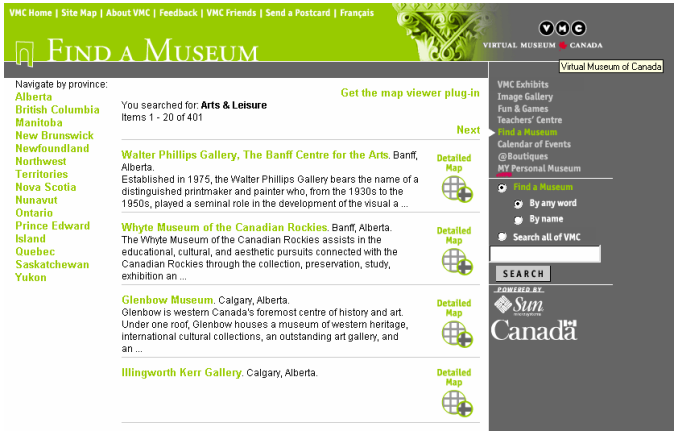
Portal



Site map



Find a Museum



Museums of Portugal

http://www.museusportugal.org/

Portal

Finding a museum

Results

Virtual Museum of UK

http://www.24hourmuseum.org.uk/mapsea.html

3 - Museums without walls

- Virtual Museum of Computing
- Virtual Museum of Arts (MUVA) in Montevideo, Uruguay
- Virtual Museum of Japanese Arts
- Virtual Museum of Bacteria
- Virtual Museum of Prehistoric Arts
- Virtual Pompei

The Virtual Museum of Computing

http://vmoc.museophile.com/

Portal

Virtual Library | Museums | Computing | Pioneers

ICOM

The Virtual Museum of Computing (VMoC)

Now accessible as: vmoc.museophile.com NEW

This virtual museum includes an eclectic collection of World Wide Web (WWW) hyperlinks connected with the history of computing and on-line computer-based exhibits available both locally and around the world.

This museum opened on 1st June 1995. The museum receives about 200 visitors each day. Please contact Jonathan Bowen if you know of relevant on-line information not included here.

Mirror sites are available in Sweden and USA courtesy of ICOM, and also elsewhere, including the UK, if you experience poor access speed. Automatic redirection to a mirror site is available.

Selected recent additions and events

NEW Edsger Wybe Dijkstra (1930-2002), died on 6 August 2002. See obituary.

NEW Both co-inventors of Simula 67, the first object-oriented programming language, died in 2002.
Ole-Johan Dahl (1931-2002) died on 29 June 2002.
Kristen Nygaard (1926-2002) died on 10 August 2002.

Galleries

- Local virtual exhibits
- Corporate history and overviews
- History of computing organizations
- General historical information
- Computer-related museums
- On-line exhibits and information
- Personal collections
- Selected newsgroups
- Computer simulators
- The future
- Other links

Local virtual exhibits

- Pioneers of Computing by the museum's "virtual director", Jonathan Bowen.
- The Alan Turing Home Page by the museum's first "virtual curator", Andrew Hodges, author of *Alan Turing: The Enigma*. See also AlanTuring.net, the Turing Archive for the History of Computing.
- Charles Babbage (1791-1871) including the Difference Engine.
- Mandelbrot Exhibition.
- A Brief History of Algebra and Computing.
- John V. Atanasoff Obituary (June 1995).
- Early Microprocessor Instruction Set Cards.
- N-dimensional cubes, including program code to generate them.
- Computer graphics image archive, including moving images.
- 3-D and SIRDS images, including Virtual Reality.

Computer-related museums

1. American Computer Museum, Bozeman, Montana, USA.
2. Bletchley Park Trust, near Milton Keynes, UK. "Britain's Best Kept Secret." See Computer Museum. See also Codes and Ciphers in the Second World War by Tony Sale.
3. Commercial Computing Museum (Commputerseum), Ontario, Canada. Dedicated to the acquisition, preservation, and exhibition of artifacts and memorabilia from the commercial use of electronic, digital computers. Includes a list of Computer History Web Sites.
4. NEW The Computer History Museum, Moffett Field, California, USA.
5. NEW The Computer Museum, Boston, Massachusetts, USA. Started by Ken Olsen, ex-president of NEW Digital Equipment Corporation. Part of the Museum of Science since 1999.
6. NEW Computer Museum, University of Amsterdam, The Netherlands. Specializes in scientific and industrial computing. Includes electronic calculators, analog computers, core memory and paper tape.
7. Computer Museum, Department of Computer Science, University of Virginia, Charlottesville, Virginia, USA.
8. Computer Museum of America, Coleman College, La Mesa, San Diego, California, USA. See sample collections and The Evolution of Computing slide show.
9. NEW The DigiBarn Computer Museum, California, USA.
10. Heinz Nixdorf MuseumsForum, Paderborn, Germany. See computer museum. (In German.)
11. The Intel Museum, Santa Clara, California, USA. Micro-chips, from the company who manufactured the first microprocessor in 1971.
12. Microsoft Museum. (Warning: may crash Netscape browsers! ;-)
13. Musée d'Histoire Informatique (Computer History Museum). A virtual museum on personal computers from 1978 onwards, by Philippe Dubois. See also the Pong story on the first video game. (In French.)
14. Museu Virtual da Informática, Portugal. A virtual museum including a number of computers such as the ENIAC. (Mostly in Portuguese.)
15. Museum of Computer Technology, Denver, Colorado, USA.
16. Museum of HP Calculators (MoHPC). Learn about reverse Polish notation!
17. Museum "Waalsdorp", The Netherlands. See computer history of the TNO Physics and Electronics Laboratory since 1927. Supercomputers, minicomuters, etc., with many photographs. (In Dutch and some English.)
18. National Cryptologic Museum, National Security Agency, Maryland, USA. See tour of exhibits.
19. National Museum of Computing Instruments, Pisa, Italy. Includes QuickTime VR plugin movies. (In Italian.)
20. National Museum of Information Technology and Telecommunications, Brasília, Brazil.
21. Personal Computer Museum, Stenungsund, Sweden. In the Guinness Book of Records because of its collection of 250 different personal computers.
22. NEW Rhode Island Computer Museum, USA.

Pioneers of Computing

NEW Edsger Wybe Dijkstra (1930-2002), died on 6 August 2002. See obituary.

NEW Both co-inventors of Simula 67, the first object-oriented programming language, died in 2002.
Ole-Johan Dahl (1931-2002) died on 29 June 2002.
Kristen Nygaard (1926-2002) died on 10 August 2002.

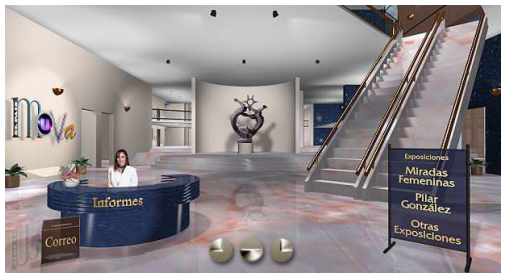
This exhibit provides links to "home" pages or other resources on people, both alive and dead, who have made a significant impact on computing.

1. Howard H. Aiken (Havard Mark I)
2. Marc Andreessen (Netscape)
3. John V. Atanasoff
4. Boris A. Babaian (Russian supercomputers)
5. Charles Babbage (Analytical Engine)
6. Charles W. Bachman (databases)
7. John Backus
8. Gordon Bell (Digital)
9. Tim Berners-Lee (WWW) NEW
10. Vannevar Bush
11. Vinton Cerf (Internet)
12. James Clark (Silicon Graphics and Netscape)
13. Edgar F. Codd (databases)
14. Seymour Cray (supercomputers)
15. Ole-Johan Dahl (Simula)
16. Donald Davies (packet switching)
17. Edsger W. Dijkstra NEW
18. John Presper Eckert (see also here)
19. Lawrence Ellison (Oracle)

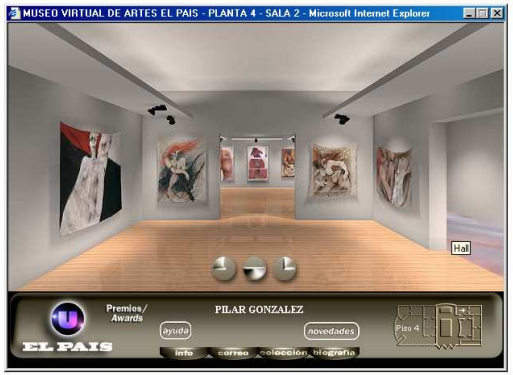
Virtual Museum of Arts

http://www3.diarioelpais.com/muva2/#

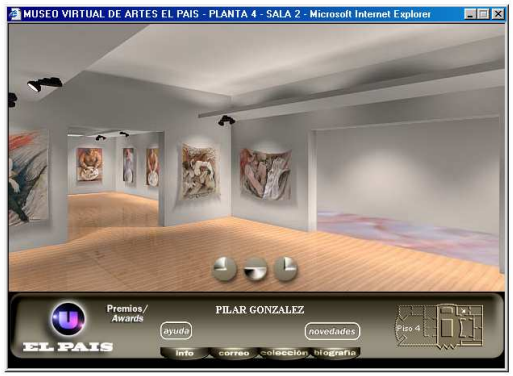
Portal



Exposition « Pilar Gonzalez »



Other view



The head

How to navigate

Virtual Architecture

Virtual Museum of Japanese Arts

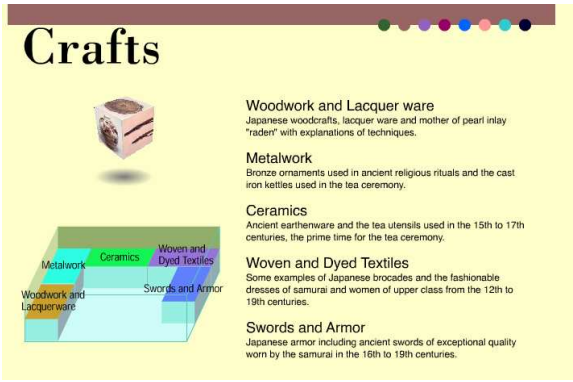
http://www.jinjapan.org/museum/menu.html

Portal

Fine arts

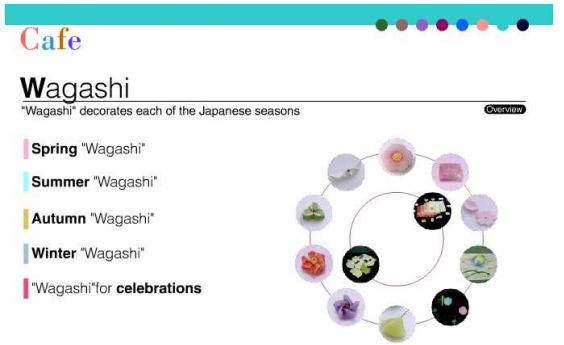
http://www.jinjapan.org/museum/paint.html

Crafts



Virtual Museum Theatre

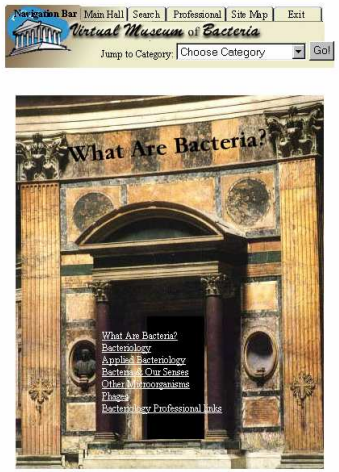
Appetizing Wagashi



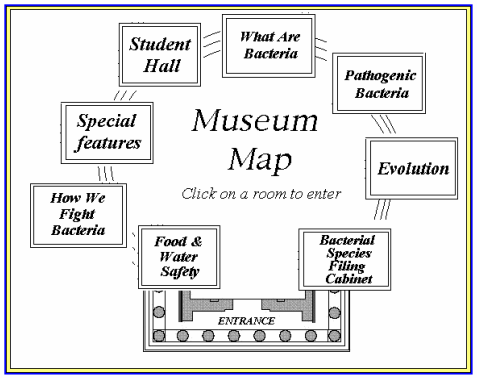
Virtual Museum of Bacteria

http://www.bacteriamuseum.org/main1.shtml

Entering



Bacteria Museum Map



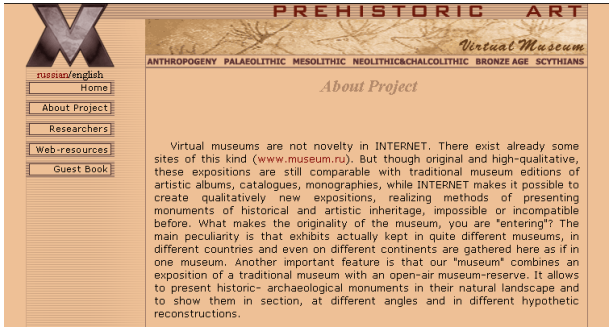
Example

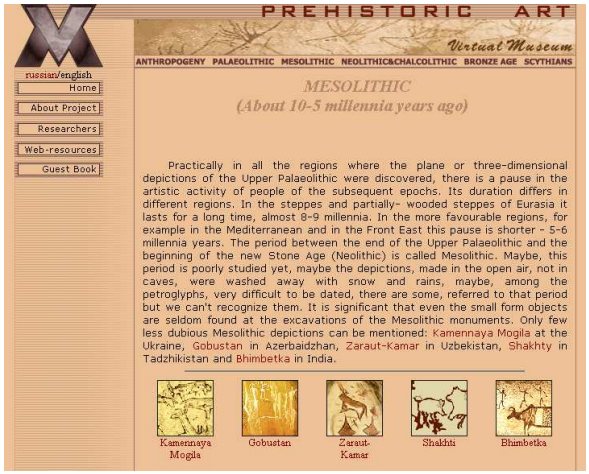
Virtual Museum of Pehistoric Art

http://vm.kemsu.ru/

Portal

Subportal





Zaraut Kamar in Uzbekistan

Virtual Pompei 3D Archaeopark

http://www.virtualpompei.it/

Films 3D

Danzatrice

Music

http://www.virtualpompei.it/cembali.wav

Image generation and archeology

- Computer image generation
- Virtual reality
- Augmented reality

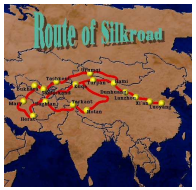
Conclusion about virtual museum without walls

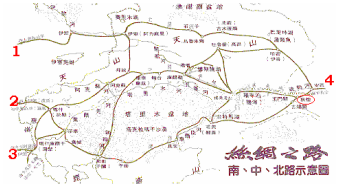
- Flexibility of design: they are not limited by the material they possess
- Possibility of integrating everything new
- Nothing regarding local organization (opening hours, etc)
- Not limited to conventional plastic arts

4 - Silk Road Virtual Museum

- UNESCO initiative
- Objective:
  - cultural heritage along this road (website)
  - 8 000 Km, 25 centuries
  - importance for the world history
- Extremities: Lyon and Tokyo
- First symposium in Tokyo, December 2002

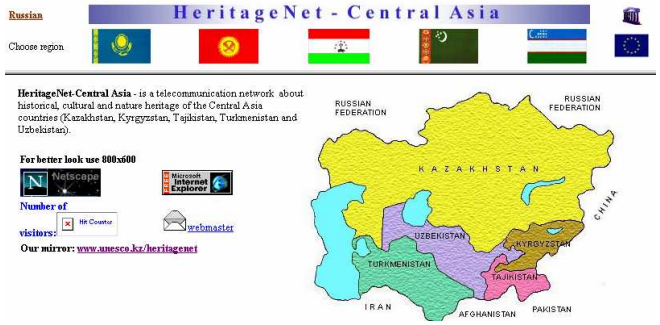
Some Silk Road Maps





Heritage Net, Central Asia

http://www.unesco.kz/heritagenet/



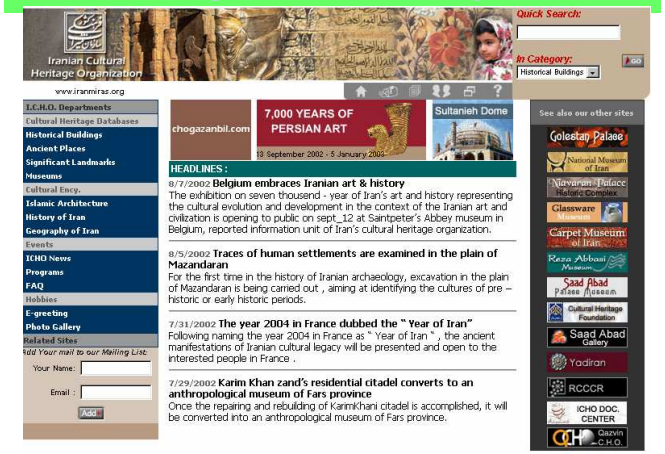
Central State Museum of Kazakhstan

http://www.unesco.kz/heritagenet/kz/hn-english/csmrk/engl/index_en.htm

Jurt

Iranian Cultural Heritage Organization

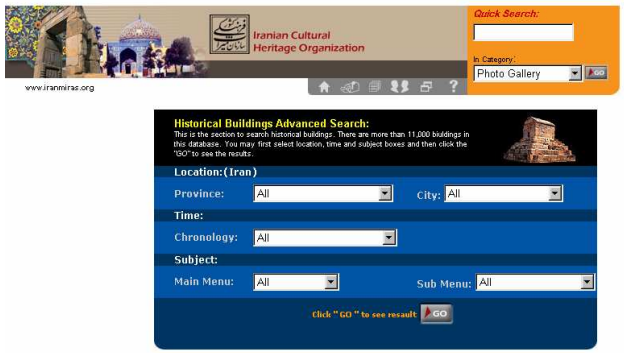
http://www.iranmiras.org



Carpet Museum of Iran

http://www.carpetmuseum.org/virtuals/virtualtours.htm

Looking for Historical Buildings



Reza Abbasi Museum

http://www.rezaabbasimuseum.org

Asia Pacific Cultural Heritage Protection Database

http://www.nara.accu.or.jp/chdb/english/index.html

The "Asia-Pacific region",referred to in this database,currently covers the UNESCO Member States Listed below (41 countries)

Afghanistan	Australia	Bangladesh
Bhutan	Cambodia	China
Cook Islands	Fiji	India
Indonesia	Iran	Japan
Kazakhstan	Kiribati	Kyrgyz
Lao P.D.R.	Malaysia	Maldives
Marshall Islands	Mongolia	Myanmar
Nauru	Nepal	New Zealand
Niue	Pakistan	Palau
Papua New Guinea	Philippines	Republic of Korea
Samoa	Solomon Islands	Sri Lanka
Tajikistan	Thailand	Tonga
Turkmenistan	Tuvalu	Uzbekistan
Vanuatu	Viet Nam	

(countries are listed in an alphabetical order)

Mogao Caves

Outline of the Heritage

Mogao Caves

Mogao Caves	
Classification	Cultural Heritage
Name	Mogao Caves
Related Sites	-
Area	length: 1.6 km
Place	Dunhuang, Gansu Province, People's Republic of China
Map	

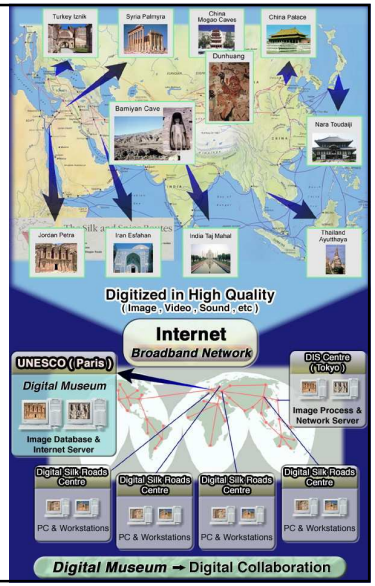
Tokyo Symposium

http://www.nii.ac.jp/dsrtokyo/dsrrep/dsrrep.html

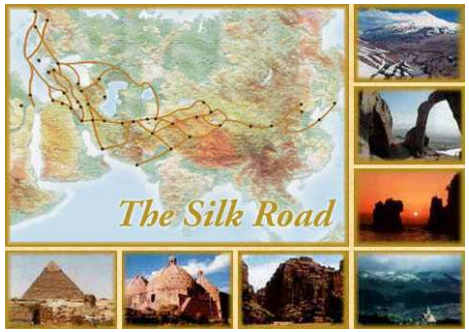
Towards this museum

- Needs assessment (What ?)
- Specification
- Linguistic problems
- Selection of collections
- Virtual Tours design
- Problems of distribution, loading, consistency, etc.

Possible structure



5 - Conclusions

- Virtual museum is a very interesting concept
  - Websites of existing museums
  - Gateways to national museums
  - Virtual museums without walls
- Various possibilities of organizing the information
  - Virtual tours
- Can inspired the design of the Digital Silk Road Museum

Thanks for your attention!