Information Technology

- Tools used to acquire, store, analyze, process, or transmit information.

History of Information Technology

Spring 03
Scott Lee

Information Technology

Sculpture & Carvings
- Earliest discovered are about 32,000 years old
- Made of ivory, bone, horn, and stone

Ivory horse: ca. 30,000 B.C.

History

- Sculpture & Carvings
  - Earliest discovered are about 32,000 years old
  - Made of ivory, bone, horn, and stone

"Venus of Willendorf" ca. 30,000 – 25,000 B.C.

Cave Paintings
- 25,000 – 10,000 years old
- Found in more than 200 caves
- Most in Spain and France
- Usually depicted animals and symbols with occasional human figures
- Used minerals as pigments and mixed with animal fat
Lascaux, France Around 28,000 B.C.

Counting Stones: About 9,000 years old

**History**

Writing

- Cuneiform
  - A Pictographic form of writing
  - Probably originated in Sumeria
  - Oldest discovered writings ca. 3,000 BC
  - Originally written vertically then horizontally
  - Carved into clay tablets which were then baked
  - No longer spoken after 2,000 BC but continued as a written language up to about 100 BC

History

Writing

- Cuneiform
  - Probably originated in Sumeria
  - Originally written vertically then horizontally
  - Oldest discovered writings ca. 3,000 BC
  - Carved into clay tablets which were then baked
  - No longer spoken after 2,000 BC but continued as a written language up to about 100 BC
From: The Cambridge Encyclopedia of Language

**Writing**

- **Papyrus**
  - First used in Egypt ca. 2700 BC
  - Made from the Papyrus reed which grew around the Nile River
  - Primary writing material in Egypt for over 2200 years

Lease – 154 B.C. Feb. 22

Business Letter – 97 B.C. July 19
History

- **Alphabet**
  - First developed between 1700 – 1500 BC in eastern Mediterranean
  - The first alphabet is called North Semitic which developed from Cuneiform and Hieroglyphics

---

Greek Alphabet

<table>
<thead>
<tr>
<th>Greek Alphabet</th>
<th>Upper Case</th>
<th>Lower Case</th>
<th>Name</th>
<th>Transliteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>α</td>
<td>a</td>
<td>Alpha</td>
<td>α</td>
</tr>
<tr>
<td>B</td>
<td>β</td>
<td>b</td>
<td>Beta</td>
<td>β</td>
</tr>
<tr>
<td>Γ</td>
<td>γ</td>
<td>g</td>
<td>Gamma</td>
<td>γ</td>
</tr>
<tr>
<td>Δ</td>
<td>δ</td>
<td>d</td>
<td>Delta</td>
<td>δ</td>
</tr>
<tr>
<td>Ε</td>
<td>ε</td>
<td>e</td>
<td>Epsilon</td>
<td>ε (short)</td>
</tr>
<tr>
<td>Ζ</td>
<td>ζ</td>
<td>z</td>
<td>Zeta</td>
<td>ζ</td>
</tr>
<tr>
<td>Η</td>
<td>η</td>
<td>h</td>
<td>Eta</td>
<td>η</td>
</tr>
<tr>
<td>Θ</td>
<td>θ</td>
<td>th</td>
<td>Theta</td>
<td>θ</td>
</tr>
<tr>
<td>Ι</td>
<td>ι</td>
<td>i</td>
<td>Iota</td>
<td>ι</td>
</tr>
<tr>
<td>Κ</td>
<td>κ</td>
<td>k</td>
<td>Kappa</td>
<td>κ</td>
</tr>
<tr>
<td>Λ</td>
<td>λ</td>
<td>l</td>
<td>Lambda</td>
<td>λ</td>
</tr>
<tr>
<td>Μ</td>
<td>μ</td>
<td>m</td>
<td>Mu</td>
<td>μ</td>
</tr>
<tr>
<td>Ν</td>
<td>ν</td>
<td>n</td>
<td>Nu</td>
<td>ν</td>
</tr>
<tr>
<td>Ξ</td>
<td>ξ</td>
<td>xi</td>
<td>Xi</td>
<td>ξ</td>
</tr>
<tr>
<td>Ο</td>
<td>ο</td>
<td>o</td>
<td>Omicron</td>
<td>o (short)</td>
</tr>
<tr>
<td>Π</td>
<td>π</td>
<td>p</td>
<td>Pi</td>
<td>π</td>
</tr>
<tr>
<td>Ρ</td>
<td>ρ</td>
<td>r</td>
<td>Rho</td>
<td>ρ</td>
</tr>
<tr>
<td>Σ</td>
<td>σ</td>
<td>s</td>
<td>Sigma</td>
<td>σ</td>
</tr>
<tr>
<td>Τ</td>
<td>τ</td>
<td>t</td>
<td>Tau</td>
<td>τ</td>
</tr>
<tr>
<td>Υ</td>
<td>υ</td>
<td>u</td>
<td>Upsilon</td>
<td>υ</td>
</tr>
<tr>
<td>Φ</td>
<td>φ</td>
<td>ph</td>
<td>Phi</td>
<td>φ</td>
</tr>
<tr>
<td>Χ</td>
<td>χ</td>
<td>chi</td>
<td>Chi</td>
<td>χ</td>
</tr>
<tr>
<td>Ψ</td>
<td>ψ</td>
<td>psi</td>
<td>Psi</td>
<td>ψ</td>
</tr>
<tr>
<td>Ω</td>
<td>ω</td>
<td>omega</td>
<td>Omega</td>
<td>ω (long)</td>
</tr>
</tbody>
</table>

---

Paper

- Invented between 100 BC – 105 AD
- Credited to Ts’ai Lun of China (105 AD)
  - A eunuch of the emperor Ho Ti during the Han Dynasty
  - Became wealthy but ultimately committed suicide
Before paper, books in China were made from bamboo (heavy) or silk (expensive). Made from mulberry bark, linen, hemp, and plant fibers that is beaten, soaked and laid out on a bamboo frame to dry.

Spread to Korea and Japan by 6th century.
751 - Chinese papermakers are taken P.O.W. by Arabs and teach them to make paper.
Appeared in Egypt by 800.
1009 - Arabs rule Spain and bring papermaking to Europe.
1150 - First paper mill built in Spain.

1411 – Papermaking spreads through Italy, France and Germany.
Germans become finest papermakers in Europe.
Book production in Europe is primarily done in monasteries by hand or through use of wood engravings.

1400?–1468
German
Mid 1400’s - Invented the mechanized printing and created the mass production of books.
Able to produce books faster and cheaper than any other method available.
Gutenberg Bible
- Printed around 1454
- Also called the 42-line bible
- The first mass-produced book in Europe
- Approximately 180 copies made
- 48 copies still exist. Most in libraries and museums.
- British National Library has two complete books

Gutenberg Press
- Early printers have difficulty making money and printed mainly religious materials as the church was a reliable source of income
- Gutenberg lost his press and other equipment to foreclosure

Printing
- 1475 – Printing has spread to most of Europe
- Large cities such as Paris and London became the centers of printing as there were more customers
- 1539 - First printing press in the “New World” in Mexico City, Mexico by Juan Pablos

Printing in America
- 1638- First printing press in the Colonies in Cambridge, Massachusetts
- Controlled by the government, it only printed laws, religious works and other government jobs
- 1700 – A few more presses were around in Boston, New York and Philadelphia
- Most reading was imported from Europe

Printing in America
- England imposed censorship restrictions on the Colonies
- All publications had to be approved by the government before they could be printed
- Newspapers had to be approved by the government until 1720
- Protestant belief in the importance of literacy
- Puritans believed in individualism: Self-discipline, self-responsibility, and dedication to the work ethic
- The individual was responsible for their own conscience and salvation
Printing in America

- Printing grew in size and importance with the coming of the American Revolution