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<thead>
<tr>
<th>Title</th>
<th>The new multimedia communication environment</th>
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<tr>
<td>Author(s)</td>
<td>Low, Chee Seng.</td>
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<td>Date</td>
<td>1994</td>
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The New Multimedia Communication Environment

By

Low Chee Seng
The New Multimedia Communication Environment
Key Questions

- What are the paradigm shifts with multimedia communication?
- What is the trend of multimedia technology?
- What is the design criteria for multimedia communication?
- What is the competitive advantage of multimedia communication?
Information Infrastructure

- Infrastructure
  - Networking
  - Any-to-Any
  - People-to-People
- Content
  - Data
  - Information
  - Knowledge
- Processing
  - Batch
  - Online
  - Interactive

Value

Time
Information Category

- Factual
  - Data Records eg. balance of bank account

- Form
  - Shapes and Structure eg. house, fingerprint

- Functional
  - Behaviour eg. aeroplane in flight

- Process
  - value chain of events
World of Multimedia

- Personal
  - Game
  - Education
  - Productivity

- Corporate
  - Multimedia Kiosk
  - Medical applications
  - Strategic Linkage

- Nation
  - Library 2000
  - Interactive distance learning
  - Help for the disadvantage
Human Communication

Interaction & Communication

People ← Time & Space → People

Person to Person
- Interaction

Through Media
- Passive/Active

audio/visual
- audio
- video
- text
# Communication Media

<table>
<thead>
<tr>
<th></th>
<th>Text</th>
<th>Audio</th>
<th>Video</th>
<th>Multimedia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>Write Type</td>
<td>Recording Studio</td>
<td>Studio</td>
<td>PC</td>
</tr>
<tr>
<td>Store</td>
<td>Paper media</td>
<td>Audio Tape</td>
<td>Video Tape</td>
<td>Digital media</td>
</tr>
<tr>
<td>Copy</td>
<td>Photocopy</td>
<td>Duplication</td>
<td>VCR</td>
<td>Easy Integrated</td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combine</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Communicate</td>
<td>Fax</td>
<td>Telephone</td>
<td>Broadcast</td>
<td>Network</td>
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<tr>
<td>Characteristics</td>
<td>Passive</td>
<td>Real time</td>
<td>Passive</td>
<td>Interactive</td>
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## Audio Technology

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>SOUND QUALITY</th>
<th>AUDIO EDITING</th>
<th>TEXT TO SPEECH</th>
<th>VOICE RECOGNITION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Digitised Sound</td>
<td>MIDI</td>
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<tr>
<td>SOUND BLASTER</td>
<td>8 Bit Mono</td>
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<td>SOUND BLASTER PRO</td>
<td>8 Bit Stereo</td>
<td>FM Synthesis</td>
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<tr>
<td>SB16 VALUE</td>
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<td>SB16 MCD</td>
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<td>FM Synthesis</td>
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<tr>
<td>SB 16 SCSI-2</td>
<td>16 bit CD-Quality</td>
<td>Wave Table Upgrade</td>
<td>AdSP Upgrade</td>
<td>Voice Assist</td>
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<td>AWE32 VALUE</td>
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<td>Sound Fonts Effect Engine</td>
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<td>Qsound E-MU Wave Synthesis</td>
<td>Standard</td>
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# Video Technology

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>VIDEO CAPTURE</th>
<th>VIDEO PLAYBACK</th>
<th>VIDEO SCALING</th>
<th>VIDEO COMPRESSION</th>
<th>VIDEO DECOMPRESSION (MPEG 1)</th>
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<tbody>
<tr>
<td></td>
<td>MULTIPLE FRAMES</td>
<td></td>
<td>H/W</td>
<td>S/W</td>
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<td>15FPS</td>
<td>20FPS</td>
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<td>VB SE</td>
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<td>MP400</td>
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</table>
Video Conferencing Technology Choice

- Network Choice
  - Normal Telephone Lines
  - LAN
  - ISDN

- Systems Choice
  - PC, Mac, Workstations
  - Operating Systems

- Functions
  - Application sharing
Video Conferencing Design Objectives

- Reach anyone anywhere
  - Normal Telephone Lines
  - PC & Interoperability
  - Windows Base

- Affordable to the mass
  - Low initial cost
  - Low running cost
Video Conferencing Technology Challenge

- Size of data
  - Compression technology
  - Network technology

- 3 types of Information
  - Audio, Data, Video

- Application Sharing

- Reliability

- Cost
Video Conferencing

- Modem
- Data Compression

time

data
Video Conferencing

- "roll-about" video conferencing systems
- ISDN DVC systems
- ShareVision PC3000
- ShareVision PC300

$ vs. functionality
Human Communication

Separated by

Time
Space
Knowledge

Connected by

Virtual Desktop

Video Conferencing & Application Sharing