Nanyang Technological University

Lab 5 Report:

Morphing

CZ2003 Computer Graphics and Visualization

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| Surface 1 (Normal, Wireframe) Formula 17 |
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| File: morphing.wrl  x1=sin(2\*pi\*u);  y1=cos(2\*pi\*v);  z1=sin(2\*pi\*u)\*sin(2\*pi\*v);  parameters [ 0 1 0 1 ]  resolution [ 50 50 ] |
| Surface 2 (Normal, Wireframe) Formula 18 |
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| File: morphing.wrl x2=(cos(2\*pi\*u)+1)\*cos(2\*pi\*v);  y2=sin(2\*pi\*u)\*cos(2\*pi\*v);  z2=sin(2\*pi\*v);  parameters [ 0 1 0 1 ]  resolution [ 50 50 ] |
| File: animation\_d.wrl  function parametric\_x(u,v,w,t)  {  x1=sin(2\*pi\*u);  x2=(cos(2\*pi\*u)+1)\*cos(2\*pi\*v);  return x1+(x2-x1)\*t;  }  function parametric\_y(u,v,w,t)  {  y1=cos(2\*pi\*v);  y2=sin(2\*pi\*u)\*cos(2\*pi\*v);  return y1+(y2-y1)\*t;  }  function parametric\_z(u,v,w,t)  {  z1=sin(2\*pi\*u)\*sin(2\*pi\*v);  z2=sin(2\*pi\*v);  return z1+(z2-z1)\*t;  } |
| We used the morphing formula to transform surface 1 to surface 2. Through adjusting the resolution, higher resolution will slow down the process of transformation. |