

<div data-bbox="232 218 644 304" data-label="Section-Header"> <h2>ITC 212 CAD/CAM for Clothing</h2> </div> <hr/> <div data-bbox="228 352 514 403" data-label="Text"> <p><i>Lecture 5</i> Pattern Design CAD Systems</p> </div> <div data-bbox="228 441 509 539" data-label="Text"> <p>Dr Roger Ng Institute of Textiles and Clothing Hong Kong Polytechnic University 2008-2009</p> </div>	<div data-bbox="815 134 1427 180" data-label="Text"> <p><b>Slide 1</b> <span style="float: right;"><b>ITC 212</b></span></p> </div> <div data-bbox="815 197 1427 621" data-label="Form"> <p>NOTES:</p> <hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/> </div>
<div data-bbox="228 678 349 714" data-label="Section-Header"> <h3>Content</h3> </div> <hr/> <div data-bbox="228 793 717 999" data-label="List-Group"> <ul style="list-style-type: none"> <li>▪ Revision of concepts from last lecture</li> <li>▪ Pattern CAD System             <ul style="list-style-type: none"> <li>&gt; Pattern Design System Vs General Purpose Design System</li> <li>&gt; Common problems with pattern makers</li> <li>&gt; Barrier of adopting 3D pattern CAD system</li> </ul> </li> <li>▪ Revision of concepts of this lecture</li> </ul> </div>	<div data-bbox="815 640 1427 686" data-label="Text"> <p><b>Slide 2</b> <span style="float: right;"><b>Content</b></span></p> </div> <div data-bbox="815 703 1427 1127" data-label="Form"> <p>NOTES:</p> <hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/> </div>
<div data-bbox="228 1184 522 1222" data-label="Section-Header"> <h3>Revision of Concepts</h3> </div> <hr/> <div data-bbox="228 1299 711 1530" data-label="List-Group"> <ul style="list-style-type: none"> <li>▪ Fashion Design System Vs General Purpose Design System             <ul style="list-style-type: none"> <li>&gt; More powerful, efficient</li> </ul> </li> <li>▪ Common problems with fashion designers             <ul style="list-style-type: none"> <li>&gt; Different input media, drawing skill, feeling</li> </ul> </li> <li>▪ Barrier of adopting 3D fashion CAD             <ul style="list-style-type: none"> <li>&gt; Different concept, drawing skill, control skill, background</li> </ul> </li> </ul> </div>	<div data-bbox="815 1146 1427 1192" data-label="Text"> <p><b>Slide 3</b> <span style="float: right;"><b>Revision of Concepts</b></span></p> </div> <div data-bbox="815 1209 1427 1629" data-label="Form"> <p>NOTES:</p> <hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/> </div>

<p><b>Revision</b></p> <hr/> <p>Some names to remember:</p> <ul style="list-style-type: none"> <li>▪ Adobe: illustrator, photoshop</li> <li>▪ Corel: coreldraw</li> <li>▪ SGI: alias/wavefront - maya cloth</li> <li>▪ Autodesk: AutoCAD</li> <li>▪ Mtech: CATIA</li> </ul>	<p><b>Slide 4</b> <span style="float: right;"><b>Revision</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>In Class Activity</b></p> <hr/>	<p><b>Slide 5</b> <span style="float: right;"><b>In Class Activity</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Summary of Standard Features</b></p> <hr/> <p>Pattern CAD Systems:</p> <ul style="list-style-type: none"> <li>▪ In class activities #1             <ul style="list-style-type: none"> <li>▶ Form a group of 4 or 5 students.</li> <li>▶ There are two copies of system specifications. List the common features.</li> <li>▶ What features you think missing?</li> </ul> </li> </ul>	<p><b>Slide 6</b> <span style="float: right;"><b>Summary of Standard Features</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

<p><b>Presentation of Finding</b></p> <hr/> <p>CAD System</p> <ul style="list-style-type: none"> <li>▪ Use the transparency to write down the lists of features.</li> <li>▪ Let's start with <b>Group 1</b></li> <li>▪ Copy the new features to the White Board</li> </ul>	<p><b>Slide 7</b> <span style="float: right;"><b>Presentation of Finding</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Lecture 5</b></p> <hr/> <p>Pattern CAD System</p>	<p><b>Slide 8</b> <span style="float: right;"><b>Lecture 5</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Pattern CAD</b> Vs <b>General Purpose Design CAD</b></p> <hr/> <ul style="list-style-type: none"> <li>▪ <b>Pattern CAD</b> <ul style="list-style-type: none"> <li>› For 2D pattern design (e.g. GGT, Lectra, Optifex, PAD)</li> <li>› For 3D pattern design (e.g. Asahi System)</li> </ul> </li> <li>▪ <b>General Purpose Design CAD</b> <ul style="list-style-type: none"> <li>› For general 2D design drawing (e.g. AutoCAD, Illustrator, CorelDraw, Freehand, etc.)</li> <li>› For general 3D design drawing (e.g. AutoCAD, Integraph, Pro-engineer, CATIA, etc.)</li> </ul> </li> </ul>	<p><b>Slide 9</b> <span style="float: right;"><b>Pattern CAD</b></span></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

<p><b>GGT, Lectra, OptiTex, PAD</b></p> <hr/> <p>Summary of key features:</p> <ul style="list-style-type: none"> <li>▪ Automatic pattern generation</li> <li>▪ Pattern digitizing</li> <li>▪ Direct drawing of pattern</li> <li>▪ Pattern adaptation (flat pattern technique)</li> <li>▪ Pattern grading (rectangular) with library</li> <li>▪ Marker lay-planning</li> </ul>	<p><b>Slide 10</b>                      <b>GGT, Lectra, OptiTex, PAD</b></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>GGT, Lectra, OptiTex, PAD (Cont.)</b></p> <hr/> <p>Equipment configuration:</p> <ul style="list-style-type: none"> <li>▪ Intel-based PC</li> <li>▪ Operating System: Win 98/ME/2000/NT</li> <li>▪ RAM: 128MB+</li> <li>▪ Display resolution: 1024x768+</li> <li>▪ Harddisk: 10G+</li> <li>▪ Digitizer: large/small</li> <li>▪ Plotter/Cutter: standing/flat bed</li> </ul>	<p><b>Slide 11 GGT, Lectra, OptiTex, PAD (Cont.)</b></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Asahi</b></p> <hr/> <p>Summary of key features:</p> <ul style="list-style-type: none"> <li>▪ Automatic pattern generation</li> <li>▪ Pattern digitizing</li> <li>▪ Direct drawing of pattern</li> <li>▪ Pattern visualization</li> <li>▪ Pattern unfolding</li> </ul>	<p><b>Slide 12</b>                      <b>Asahi</b></p> <hr/> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

<p><b>Asahi (Cont.)</b></p> <hr/> <p>Equipment configuration</p> <ul style="list-style-type: none"> <li>▪ Intel-based PC</li> <li>▪ Operating System: Win 98/ME/2000/NT</li> <li>▪ RAM: 128MB+</li> <li>▪ Display resolution: 1024x768+</li> <li>▪ Harddisk: 10G+</li> <li>▪ Digitizer: large/small</li> <li>▪ Plotter/Cutter: standing/flat bed</li> </ul>	<p><b>Slide 13</b> <span style="float: right;"><b>Asahi (Cont.)</b></span></p> <hr/> <p>NOTES:</p>
<p><b>AutoCAD</b></p> <hr/> <p>AutoDesk Inc.</p> <ul style="list-style-type: none"> <li>▪ 2D/3D engineering drawing</li> <li>▪ Programmable using AutoLisp</li> <li>▪ Drawing library</li> <li>▪ Matching capability with any 2D pattern CAD system</li> <li>▪ Some U.S. universities are using AutoCAD to teach pattern design.</li> </ul>	<p><b>Slide 14</b> <span style="float: right;"><b>AutoCAD</b></span></p> <hr/> <p>NOTES:</p>
<p><b>AutoCAD (Cont.)</b></p> <hr/> <p>Equipment configuration</p> <ul style="list-style-type: none"> <li>▪ Intel-based PC, SGI</li> <li>▪ Operating System: Windows NT, Unix</li> <li>▪ RAM: 128MB-(PC), 512MB-(SGI)</li> <li>▪ Display resolution: 1024x768+</li> <li>▪ Harddisk: 10G+</li> <li>▪ Digitizer and Plotter</li> </ul>	<p><b>Slide 15</b> <span style="float: right;"><b>AutoCAD (Cont.)</b></span></p> <hr/> <p>NOTES:</p>

<p><b>Some demonstration of Pattern CAD Systems</b></p> <hr/>	<p><b>Slide 16</b> <span style="float: right;"><b>Some demonstration</b></span></p> <p>NOTES:</p>
<p><b>Common problems with pattern designers</b></p> <hr/> <ul style="list-style-type: none"> <li>■ <b>Different input media</b> <ul style="list-style-type: none"> <li>&gt; Manual pattern drawing is based on pencil Vs mouse, digitizer or graphics tablet.</li> </ul> </li> <li>■ <b>Different drawing skill</b> <ul style="list-style-type: none"> <li>&gt; Free hand drawing Vs geometric drawing.</li> </ul> </li> <li>■ <b>Different feeling</b> <ul style="list-style-type: none"> <li>&gt; Human Vs computer</li> </ul> </li> <li>■ <b>Accuracy of drawing</b> <ul style="list-style-type: none"> <li>&gt; Sharpness of pencil Vs computer snapping.</li> </ul> </li> </ul>	<p><b>Slide 17</b> <span style="float: right;"><b>Common problems</b></span></p> <p>NOTES:</p>
<p><b>Barrier of Adopting 3D CAD System</b></p> <hr/> <ul style="list-style-type: none"> <li>■ <b>Different concept</b> <ul style="list-style-type: none"> <li>&gt; 2D Vs 3D</li> </ul> </li> <li>■ <b>Different drawing skill</b> <ul style="list-style-type: none"> <li>&gt; 2D Vs 3D</li> </ul> </li> <li>■ <b>Different control skill</b> <ul style="list-style-type: none"> <li>&gt; Controlling the drawing plane</li> <li>&gt; Controlling large amount of control vertices</li> </ul> </li> <li>■ <b>Different background</b> <ul style="list-style-type: none"> <li>&gt; Craftman based Vs engineering based</li> </ul> </li> </ul>	<p><b>Slide 18</b> <span style="float: right;"><b>Barrier of Adopting 3D CAD</b></span></p> <p>NOTES:</p>

<p><b>Revision of Concepts</b></p> <hr/> <ul style="list-style-type: none"> <li>▪ <b>Pattern Design System Vs General Purpose Design System</b> <ul style="list-style-type: none"> <li>&gt; More efficient</li> </ul> </li> <li>▪ <b>Common problems with pattern designers</b> <ul style="list-style-type: none"> <li>&gt; Different input media, drawing skill, feeling, accuracy</li> </ul> </li> <li>▪ <b>Barrier of adopting 3D pattern CAD</b> <ul style="list-style-type: none"> <li>&gt; Different concept, drawing skill, control skill, background</li> </ul> </li> </ul>	<p><b>Slide 19</b> <span style="float: right;"><b>Revision of Concepts</b></span></p>
<p><b>Revision</b></p> <hr/> <p>Some names to remember</p> <ul style="list-style-type: none"> <li>▪ GGT, Lectra, PAD System, OptiTex, Investronica</li> <li>▪ Asahi</li> <li>▪ CDI (Lectra)</li> <li>▪ AutoCAD</li> </ul>	<p><b>Slide 20</b> <span style="float: right;"><b>Revision</b></span></p>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>