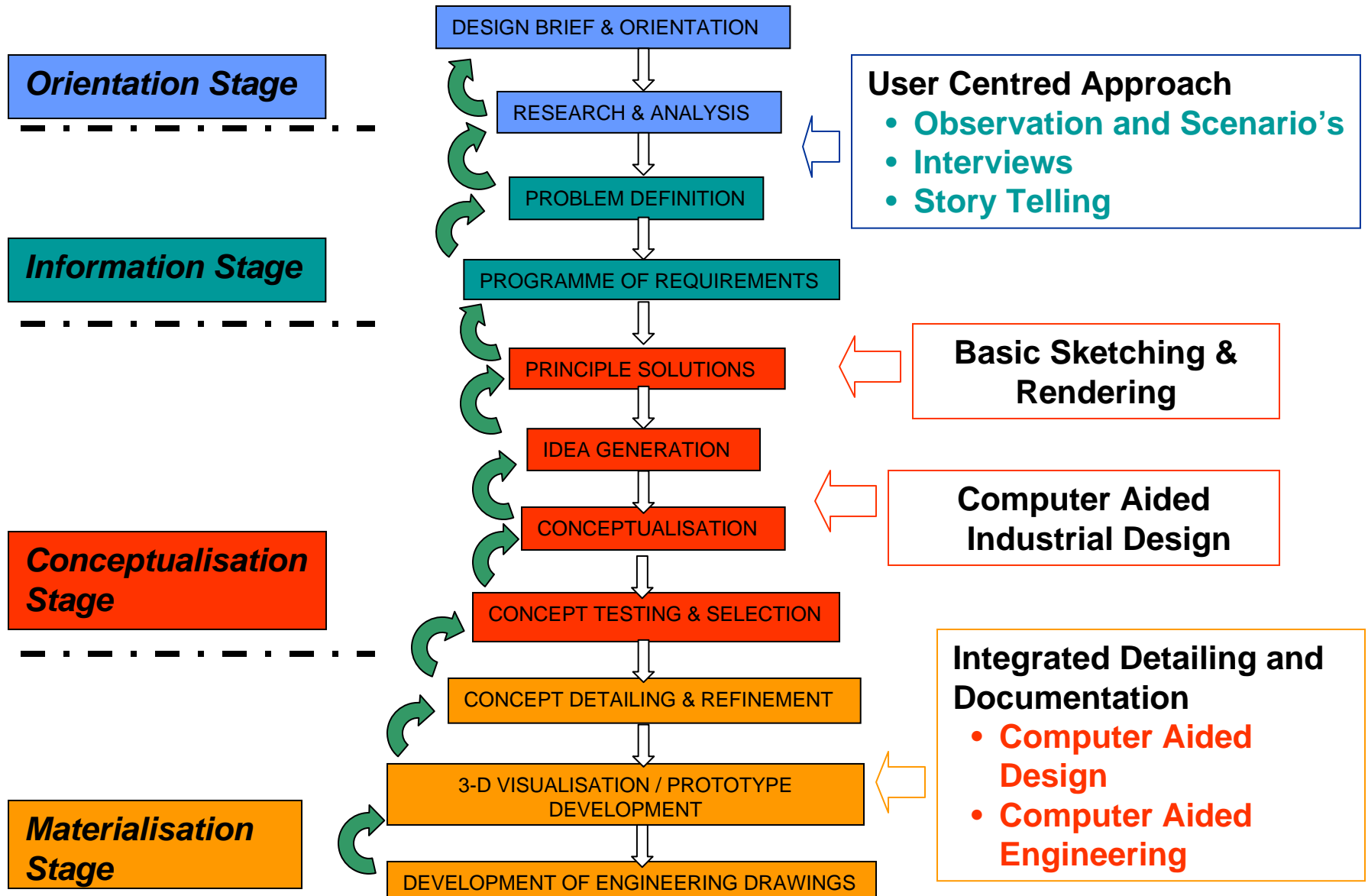


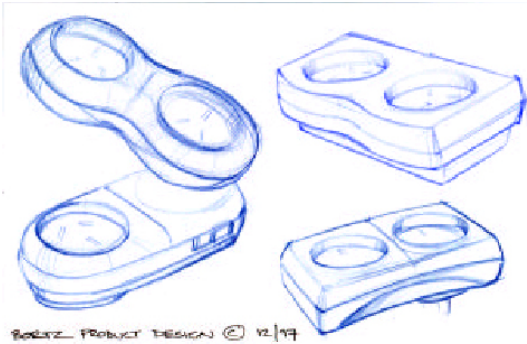
Downstream Design and Visualisation using CAD

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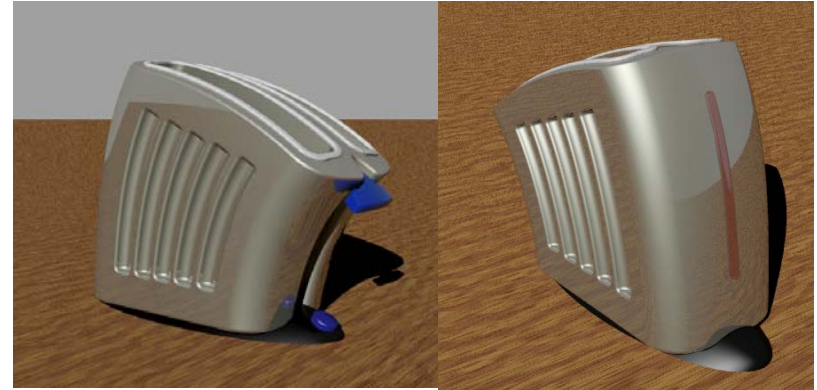
February 2007

The Classical Design Process

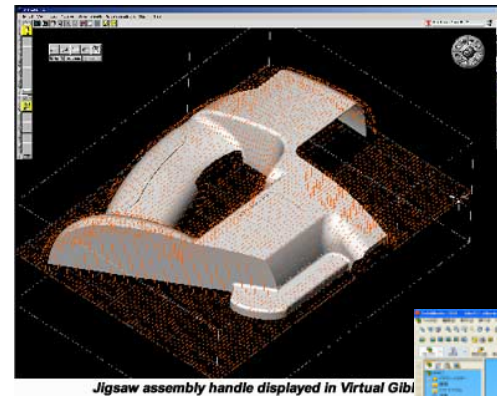
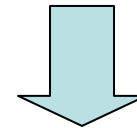




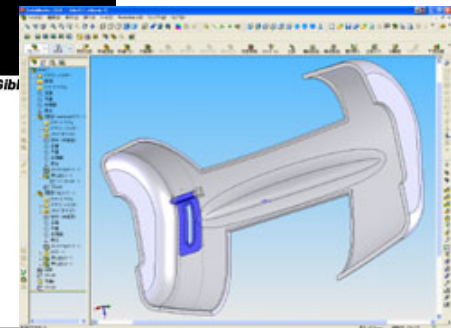
A Sketch or Drawing



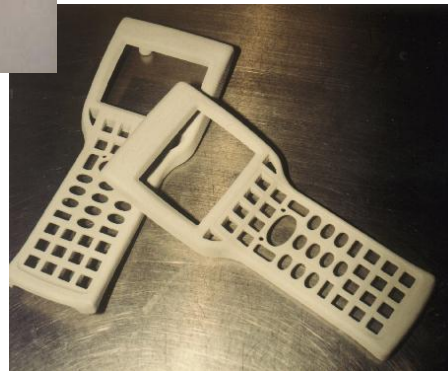
A Rhino Exterior Model



A SolidWorks Model



Rapid Prototyped Parts



Course Objectives

WORKSHOP 5: Designing with Computers (*two days*)

This workshop will teach participants on how to design a product from idea generation through conceptualisation to detailing and prototyping, using a selection of Computer Aided Design (CAD) tools (*ALIAS Sketch, Rhino and SolidWorks*).

After completion of this workshop participants should be able demonstrate the down stream process through the application of Rhino and Solidworks from idea generation to detail design.



Day 1: Introduction to Rhino

Time	Topic	Venue, Special remarks etc.
9:00 – 9:45	Introduction to 3-D Computer Modeling	Computer Lab: Rom: 330 Teacher: André Liem
9:45 – 10:30	HANDS-ON: Getting to know Rhino	
10:30 – 10:45	<i>Break</i>	<i>Computer Lab: ROM 330</i>
10:45 – 11:30	HANDS-ON: Lines & Curves	Computer Lab: Rom: 330
11:30 – 12:15	HANDS-ON: Solid Modeling	Computer Lab: Rom: 330
12:15 – 13:15	<i>Lunch</i>	<i>Terra Elektro Bygg</i>
13:15 - 14:00	HANDS-ON: Surface Generation	Computer Lab: Rom: 330
14:00 – 15:00	HANDS-ON: Advanced Surface Generation Techniques	Computer Lab: Rom: 330
15:00 – 15:45	HANDS-ON: Creating Organic Shapes (Rubber Duck)	Computer Lab: Rom: 330
15:45 - 16:00	<i>Break</i>	<i>Computer Lab: ROM 330</i>
16:00 – 17:00	DEMO: <ul style="list-style-type: none"> • Rendering and Lighting Applications • Down Stream Computer Aided Design 	Computer Lab: Rom: 330



Day 2: Introduction to SolidWorks & Rapid Product Development

Time	Topic	Venue, Special remarks etc.
9:00 – 9:15	Introduction to Solid Works	Computer Lab: Rom: 330
9:15 – 10:00	DEMO: 2-D Sketching & Part Modeling	Teachers: Jose Manuel André Liem
10:00 – 10:30	HANDS-ON: 2-D Sketching & Part Modeling	
10:30 – 10:45	<i>Break</i>	Computer Lab: Rom: 330
10:45 – 11:15	HANDS-ON: 2-D Sketching & Modeling	Computer Lab: Rom: 330
11:15 – 11:45	DEMO: <ul style="list-style-type: none"> • Creating assemblies: Rhino versus Solidworks • Shelling Parts 	Computer Lab: Rom: 330
11:45 - 12:15	HANDS-ON: Creating Assemblies and part shelling	Computer Lab: Rom: 330
12:15 – 13:00	<i>Lunch</i>	<i>Terra Elektro Bygg</i>
13:00 – 13:30	DEMO: <ul style="list-style-type: none"> • Adding features • File conversion for Rapid Prototyping 	Computer Lab: Rom: 330
13:30 - 15:15	HANDS-ON: Adding features and file conversion	Computer Lab: Rom: 330
15:15 - 15:30	<i>Break</i>	
15:30 – 17:00	Introduction to Rapid Product Development	Computer Lab: Rom: 330 / Workshop