from Natural to Artificial

a post-naturalistic evolution's catalogue

morphing trough:

transformation
deformation
scaling
repetition
...

unveiling of:

structures
frames
shells
elements
details
...

exploring the aesthetics of natural forms
discovering beauty in shapes and details
modeling organic shapes into the virtual world
manufacturing prototypes in CNC/RP

fig.1

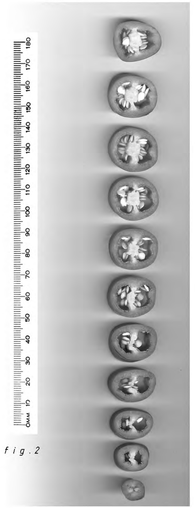


fig.2

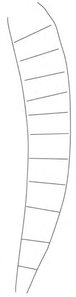
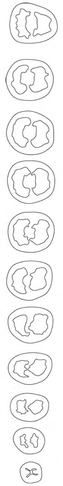


fig.3



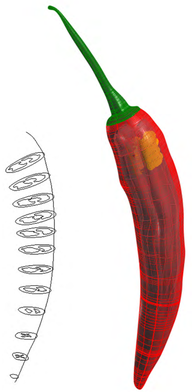


fig.4

fig.5

fig.6

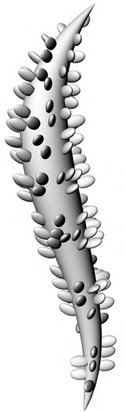


fig.7

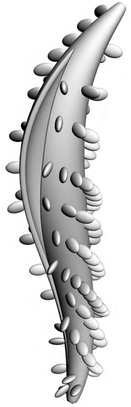


fig.8

fig.9

fig.12

fig.10

fig.11

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Huang Yanying

 # fig.1: Chilli - Scale 1:1 - Dimension mm.180 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Rhino Transformation Process
 # fig.7: 3D Rhino Transformation Process # fig.8: 3D Rhino Transformation Process # fig.9: Final 3D Rendering # fig.10: Final Output Image # fig.11: Final Output Image # fig.12: Final Output Image

fig.1

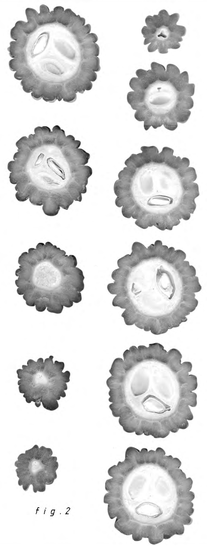


fig.2

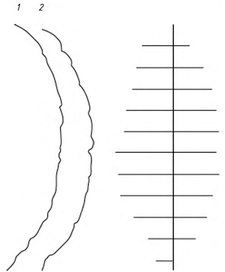


fig.3

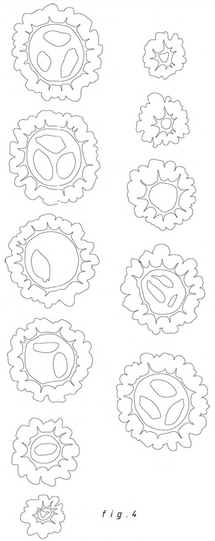


fig.4

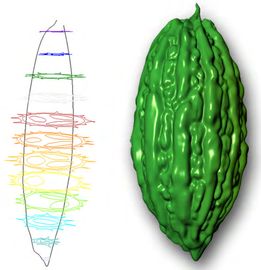


fig.5

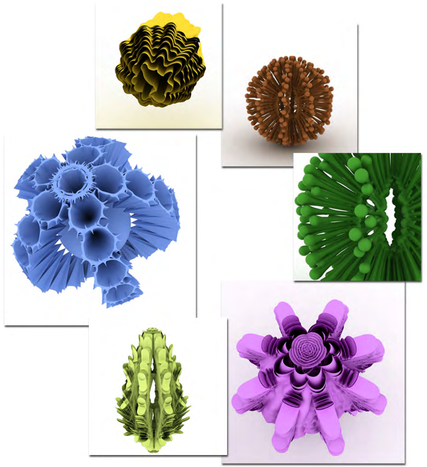


fig.6

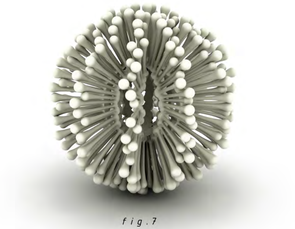


fig.7

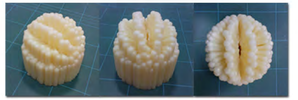


fig.8

fig.11

fig.9

fig.10

from Natural to Artificial - PRO330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Tan Weihao

 # fig.1: Mini Bitter Gourd - Scale 1:1 - Dimension mm.125 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.5:3D Rhino Model Reconstruction # fig.6: 3D Rhino Transformation Process
 # fig.7: 3D Renderings # fig.8: Images from CNC/RP Process # fig.9: Final Output Image # fig.10: Final Output Image # fig.11: Final Output Image

fig.1

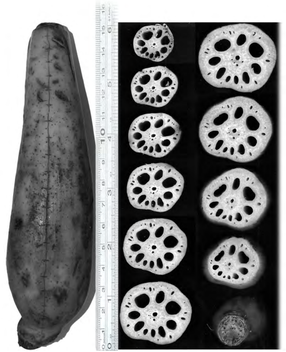


fig.2

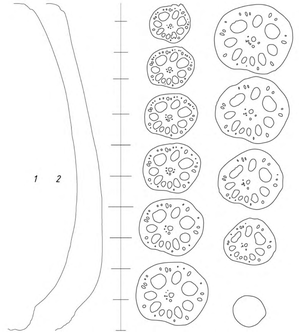


fig.3

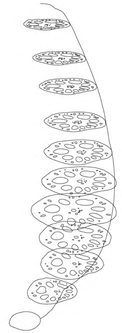


fig.4

fig.5

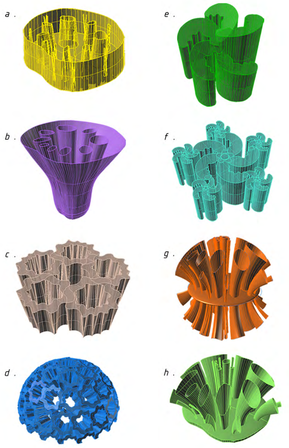


fig.6

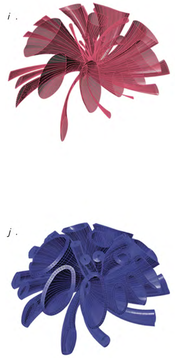


fig.7

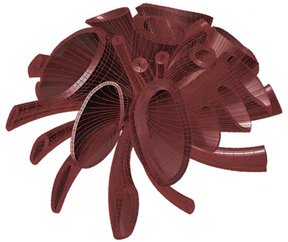


fig.8

fig.11

fig.9

fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Toh Pei Ru

 # fig.1: Lotus' Root - Scale 2:3 - Dimension mm.153 # fig.2: Points & Sections - Photoscan - Scale 2:3 # fig.3: Sections - 2D Graphic Reconstruction - Scale 2:3 # fig.4: 3D Sections # fig.5: 3D Rhino Model Reconstruction # fig.6: 3D Rhino Transformation Process # fig.7: Final Concept - 3D Rhino Transformation # fig.8: Final Model - 3D Rendering # fig.9: Printed Model - Bottom View # fig.10: Printed Model - Top View # fig.11: Printed Model - Perspective View

fig.1

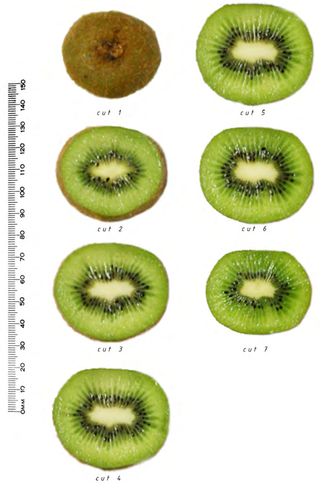


fig.2

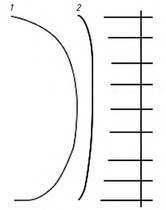


fig.3

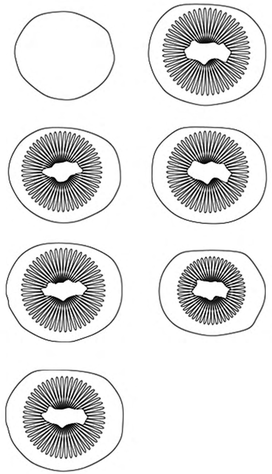


fig.4

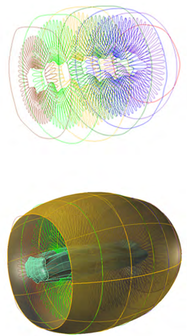


fig.5

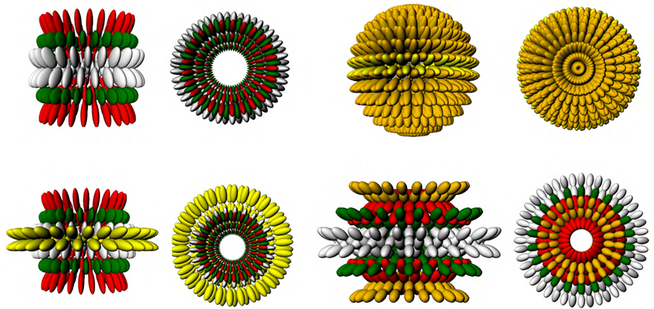


fig.6

fig.7

fig.8

fig.9

from Natural to Artificial - PRO 330 - Advanced form Workshop - Fall 2008 - Assist.Prof.Fabrizio Galli - Student : Steven Kurniawan Soedjiono

fig.1: Kiwi - Scale 1:1 - Dimension mm.083 # fig.2: Points and Sections - Photoscan - Scale 1:1 # fig.3: Cross-sections trace - Scale 1:1 # fig.4: 2D Reconstruction - Scale 1:1 # fig.5: 3D Rhino Model Reconstruction
fig 6: 3D Rhino Transfprmation Process # fig 7: Images from CNC / RP Process # fig 8: Final Output Image - sideview # fig 9: Final Output Image - Detail

fig.1

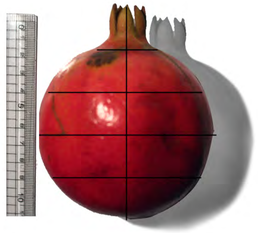


fig.2

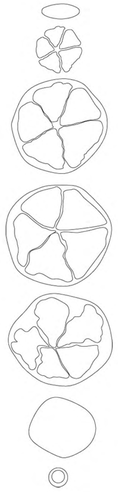


fig.3

fig.4

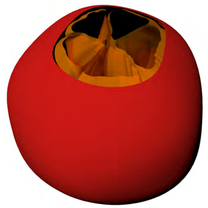


fig.5

fig.6

fig.7

fig.8

fig.9

fig.10

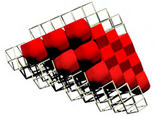


fig.11

fig.12

fig 13

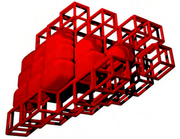


fig 14

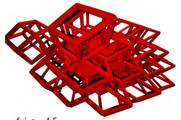


fig 15

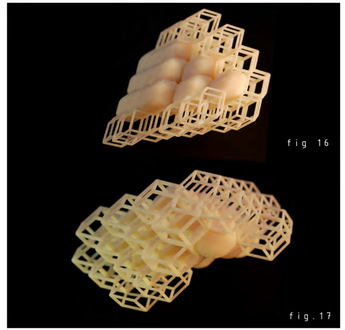


fig 16

fig.17

Fig 18

Fig.19

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Tan Wanxin Sherry

 # fig.1: Promegranade - Scale 1:1 - Dimension mm.140 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3,4: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.5,6: 3D Rhino Model Reconstruction # fig.7,8 Photos, promegranade details # fig.9, 10, 11, 13: Initial explorations renders
 # fig.12, 14, 15: Final model renders # fig.16, 17, 18, 19: Final Output Images

fig.1

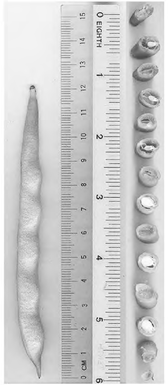


fig.2

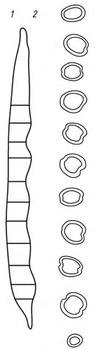


fig.3

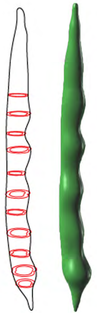
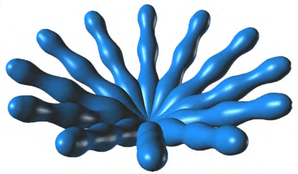


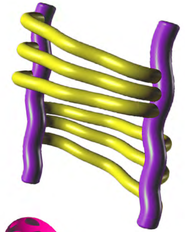
fig.4

fig.5

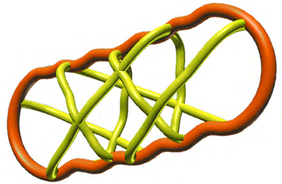
a.



b.



c.



d.

fig.6

fig.7

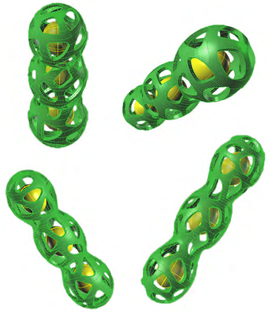


fig.8

fig.11

fig.9

fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student: Ler Rui Qi

 # fig.1: Green Bean - Scale 1:1 - Dimension mm.140 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5-6: 3D Rhino Transformation Process # fig.7: 3D Rendering of chosen figure # fig.8: Four views of chosen figure. #fig.9: Final model- Side view # fig.10: Final Model- Close up perspective view # fig.11: Final Model- Top view

fig.1

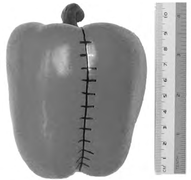


fig.2

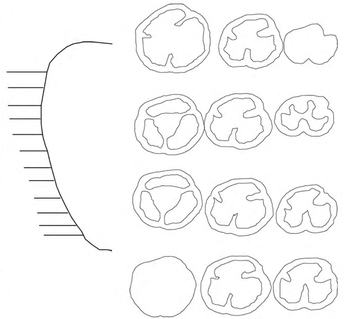
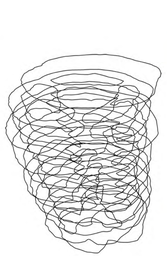


fig.3



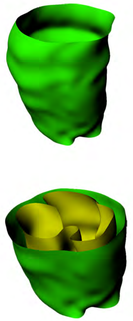


fig.4

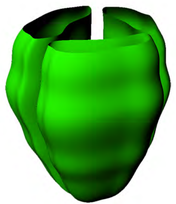


fig.5

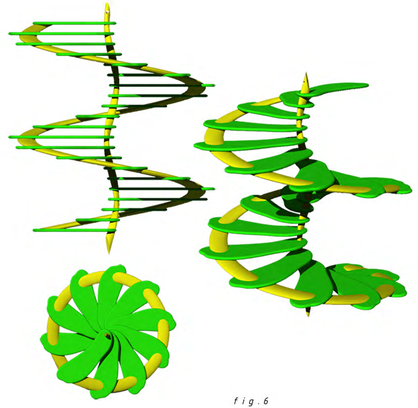


fig.6

fig.7

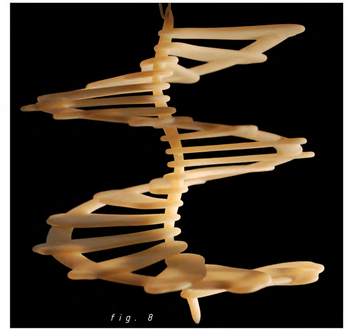


fig. 8

fig.9

fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Rohan Routroy

 # fig.1: Pepper Capsicum - Scale 1:1 - Dimension mm.101 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6:3D Renderings # fig.7: Image from Rapid Prototyping Process # fig.8-9-10:Final Output Images

fig.1

fig.2

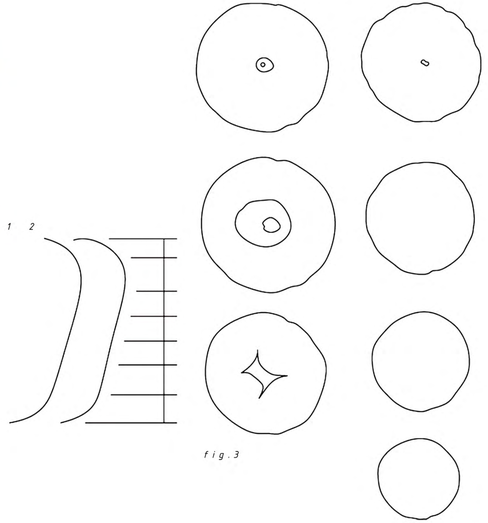


fig.3

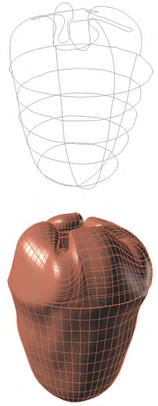


fig.4

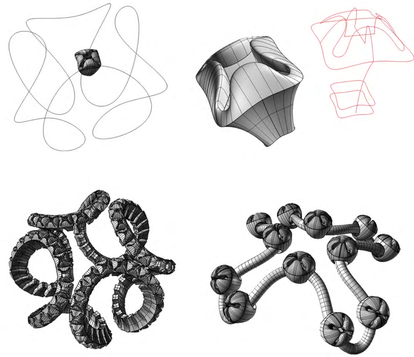


fig.5

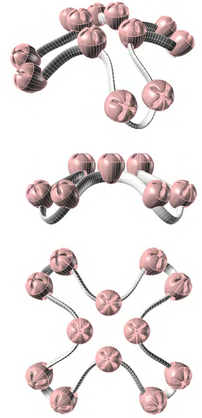


fig.6

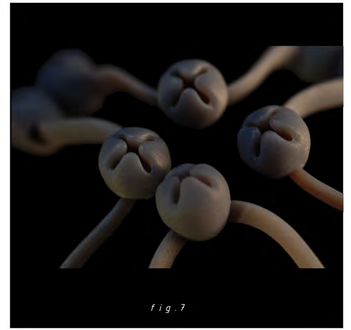


fig.7

fig.8

fig.9

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Parimala D/O Sivaraj

 # fig.1: Rose Apple - Scale 1:1 - Dimension mm.90 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Renderings # fig.7: Images from CNC/RP Process
 # fig.8: Final Output Image # fig.9: Final Output Image # fig.10: Final Output Image # fig.11: Final Output Image # fig.12: Final Output Image

fig.1

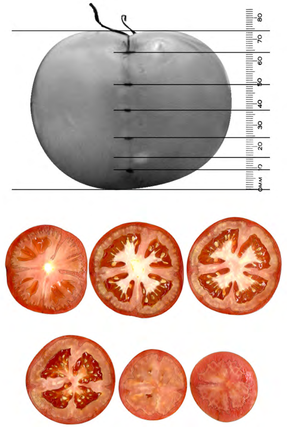


fig.2

fig.3

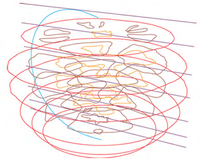


fig.4

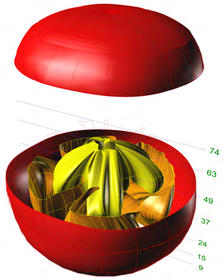


fig.5

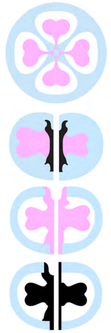


fig.6

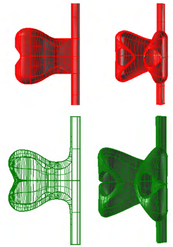


fig.7

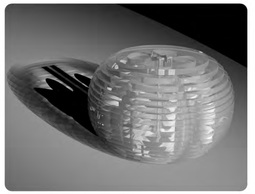


fig.8

fig.9

fig.10

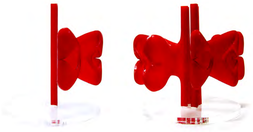


fig.11

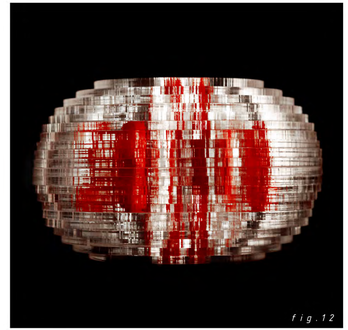


fig.12

fig.13

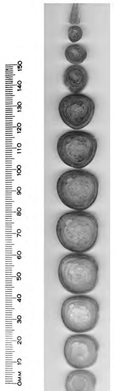
fig.14

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Nur'Iffah Sa'adon

 # fig.1: Beef Steak Tomato - Scale 1:1 - Dimension mm.74 # fig.2: Photoscan - Scale 1:2- Cross-sections # fig.3: Ponits and Sections - Cross-sections trace - Scale 1:2 # fig.4: 2D Reconstruction # fig.5: 3D Rhino Construction # fig.6: Different permutations of negative space 1 # fig.7: Development of structure based on negative space # fig.8: 3D Rhino Rendering # Fig 9: RP Printed Piece # Fig 10: Printed Piece (after cleaning process) # Fig 11: Final Pieces Arranged # Fig 12-13-14 : Rapid Prototyping + Laser Cutting final assembling images

fig.1

fig.2



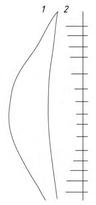


fig.3

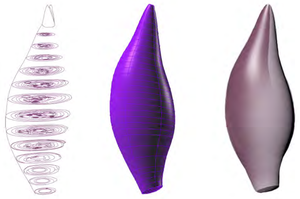
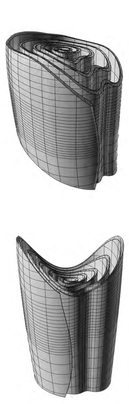


fig.4



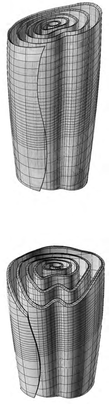


fig.5

fig.6

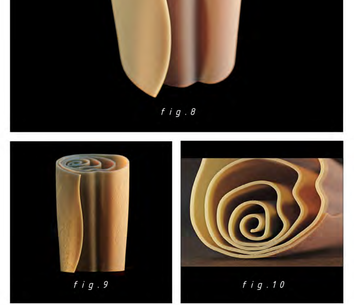


fig.8

fig.9

fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Nicole Ning

 # fig.1: Myoga - Scale 1:1 - Dimension mm.89 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process - Exploration of internal spiral forms of a Myoga # fig.6: 3D Rhino Transformation Process - Ideation of the exterior form # fig.7: 3D Renderings - Orthographic views of the final form # fig.8: Final Output Image - capturing the simplistic and sleek essence of a Myoga # fig.9: Final Output Image - front view of the form showing the clean cut edges # fig.10: Final Output Image - detailled view of internal layers

fig.2

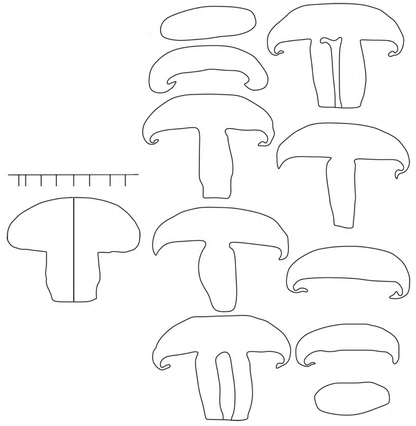


fig.3

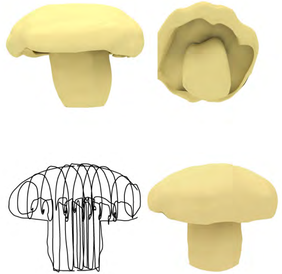


fig.4

fig.5

fig.6

fig.7

fig.8

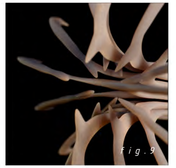


fig.9

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student ZHAO CEN Kat

 # fig.1: Mushroom - Scale 1:1 - Dimension mm.60 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Renderings # fig.7: Images from RP Process - Side View
 # fig.8: Top View # fig.9: Detail Rapid Prototyping Print-OBJECT

fig.1

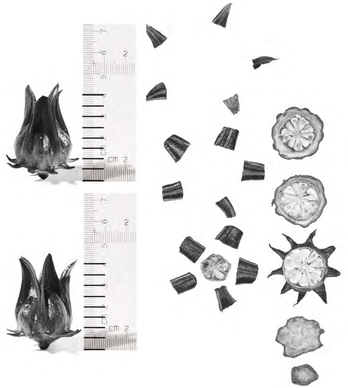


fig.2

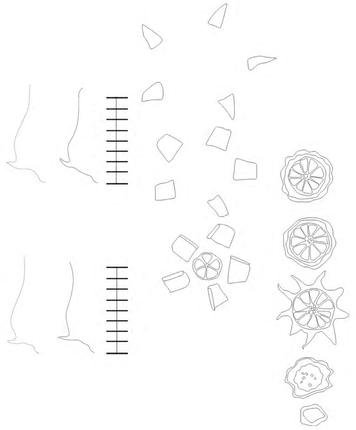


fig.3

fig.4

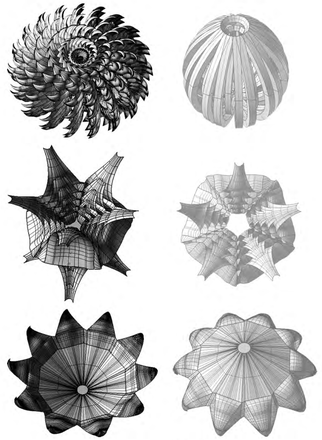


fig.5

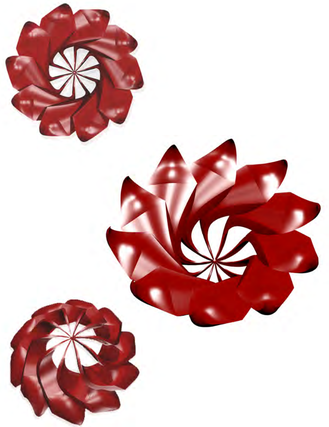


fig.6

fig.9

fig.7

fig.8

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Kwok Kai Hwei

 # fig.1: Roselle - Scale 1:1 - Dimension mm 45 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process - Exploring forms which evolves around the idea blooming # fig.6: 3D Renderings
 # fig.7: Final Output Image # fig.8: Final Output Image # fig.9: Final Output Image

fig.1

fig.2

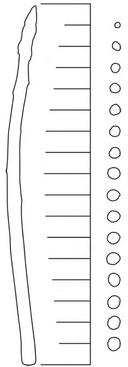


fig.3

fig.4

fig.5

fig.6

fig.7

fig.8

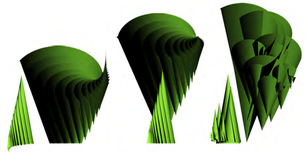


fig.9

fig.10

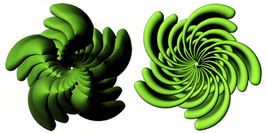


fig.11

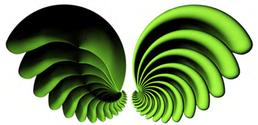


fig.12

fig.13

fig.14

fig.17

fig.15

fig.16

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Nurhuda Mohamed Khamis and The Asparagus

 # fig.1: Asparagus Spear - Scale 1:1 - Dimension mm.170 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5 to fig.13: 3D Rhino Transformation Process in 3D Renderings # fig.14: Final Output Image with Reference to Fractal Imagery # fig.15 to fig.17: Final Output Image

fig.1

fig.2

fig.3

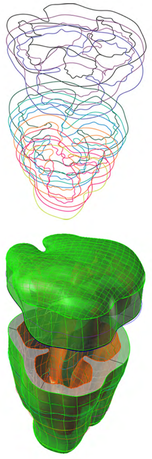


fig.4

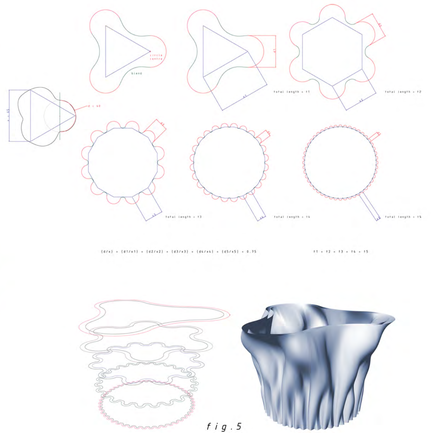


fig.5

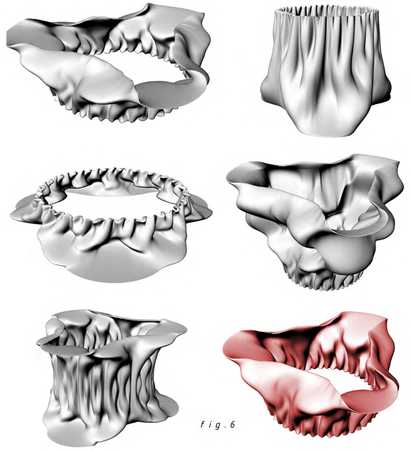


fig.6

fig.7

fig.8

fig.9

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Fung Kwok Pan

 # fig.1: Green Pepper - Scale 1:1 - Dimension mm.180 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: Principles Generated For Building The Basic 3D Surface
 # fig.6: Exploratory Forms Based On Basic Surface - 3D Renderings # fig.7-8-9: Final Output Rapid Prototyping

fig.1

fig.2

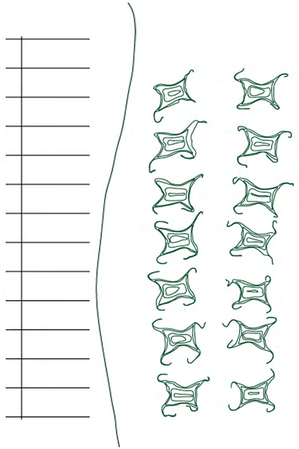


fig.3

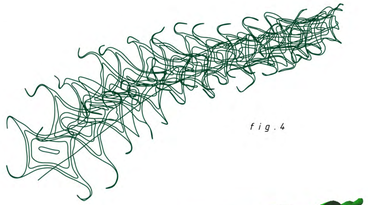


fig.4

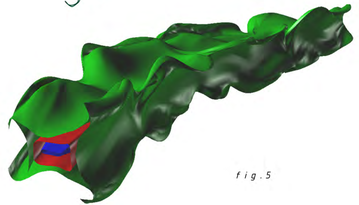


fig.5

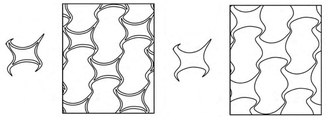


fig.6

fig.7

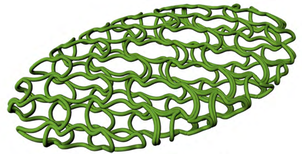


fig.8

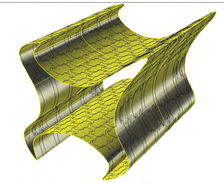


fig.9

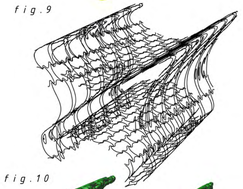


fig.10

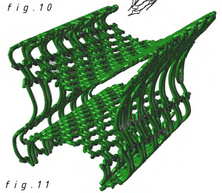
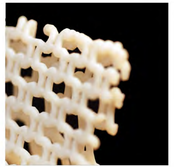


fig.11



from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Daniel Lim Yu-Heng

 # fig.1: Four Angled Bean - Scale 1:1 - Dimension mm.214 # fig.2: Photoscan - Scale 1:1- Cross-sections # fig.3: Ponits and Sections - Cross-sections trace - Scale 1:1 # fig.4: 2D Reconstruction # fig.5: 3D Rhino Construction
 # fig.6: Tiled cross-section 1 # fig.7: Selected Tiled cross-section # fig.8: Transformation Test # Fig 9: Projection of tile curves on surface # Fig 10: Wire Frame of Model # Fig 11: 3D Rhino Rendering
 # Fig 13 : Final Output image

fig.1

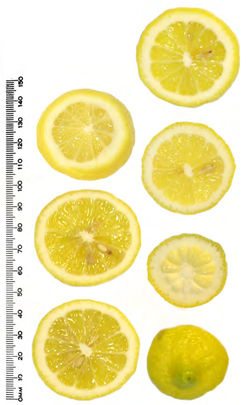


fig.2

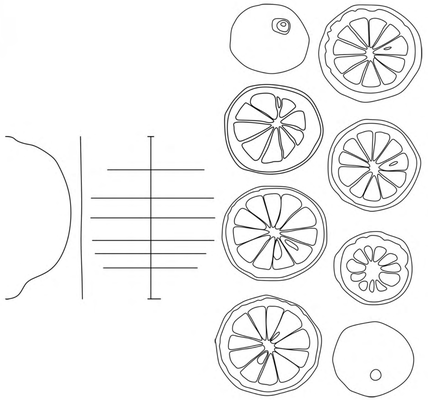


fig.3

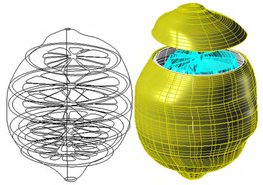


fig.4

fig.5

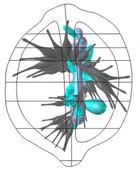


fig.6

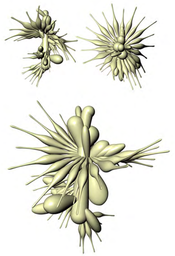


fig.7

fig.8

fig.11

fig.9

fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Cai Baolun

 # fig.1: Ladies' Finger - Scale 1:1 - Dimension mm.140 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6:Transformation Parts Placement # fig.7: 3D Renderings
 # fig.8: Images from CNC/RP Process # fig.9: Final Output Image # fig.10: Final Output Image # fig.11: Final Output Image

fig.1

fig.2

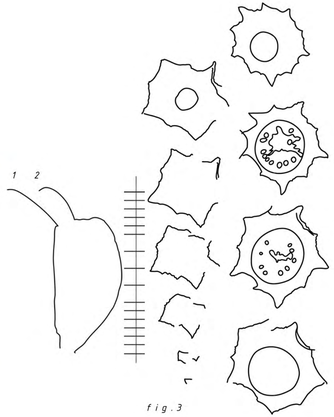


fig.3

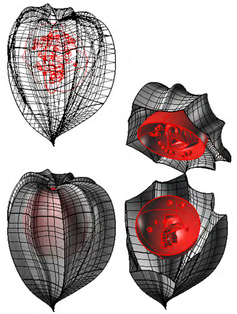


fig.4

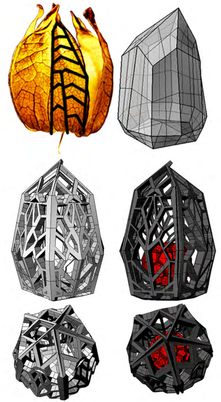


fig.5

fig.6

fig.7

fig.10

fig.8

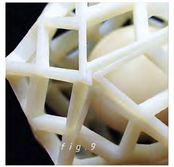


fig.9

from Natural to Artificial – PR0330 – Advanced Form Workshop – Fall 2008 – Assist.Prof. Fabrizio Galli – Student .Loo An Ni

 # fig.1: Cape Gooseberry – Scale 1:1 – Dimension mm.63 # fig.2: Points & Sections – Photoscan – Scale 1:1 # fig.3: Sections – 2D Graphic Reconstruction – Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Renderings # fig.7: Images from CNC/RP Process # fig.8: Final Output Image # fig.9: Final Output Image # fig.10: Final Output Image

fig.1

fig.2

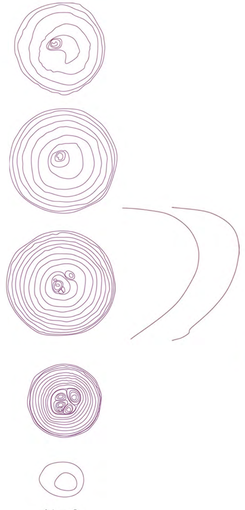


fig.3

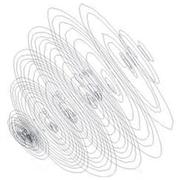


fig.4

fig.5

fig.6a

fig.6b

fig.6c

fig.6d

fig.6e

fig.7

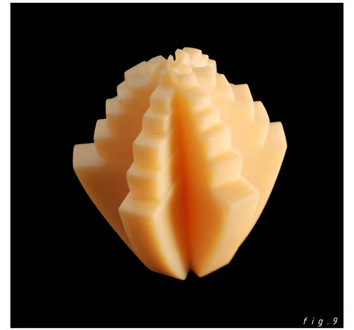


fig.9

fig.8

fig.10

from Natural to Artificial - PRO330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student : Angela Setho

 # fig.1: Onion - Scale 1:1 - Dimension 163mm # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction scale 1:1 # fig.4: Compilation of cross-sections of onion slices # fig.5: 3D Rhino Reconstruction # fig.6a-6e: 3D Rhino Transformation Process # fig.7: Final Concept - 3D Transformation # fig.8: Work Process # fig.9: Printed Model - Standing View # fig.10: Printed Model - Perspective view

fig.1

fig.2

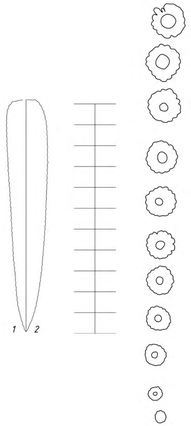


fig.3

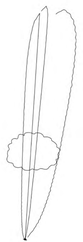


fig.4

fig.5

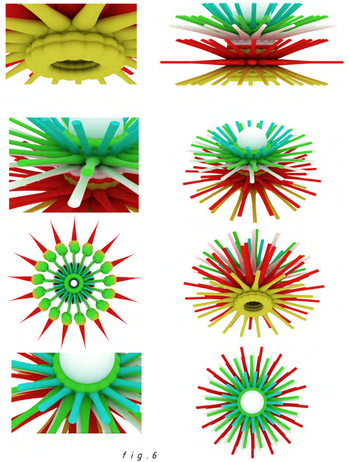
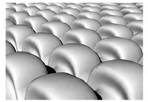


fig.6



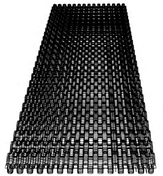


fig.7

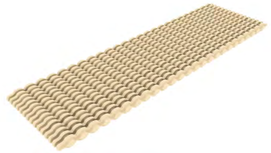


fig.8

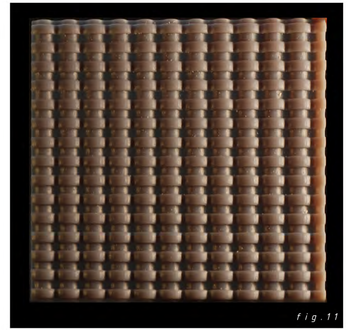


fig.11

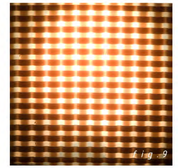


fig.9

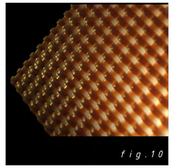


fig.10

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Andrew Susilo Putra

fig.1: Baby Corn - Dimension mm.110 # fig.2: Points & Sections - Photoscan # fig.3: Sections - 2D Graphic Reconstruction - Scale 2:3 # fig.4: 3D Sections # fig.5: 3D Rhino Model Reconstruction # fig.6: 3D Rhino Transformation Process # fig.7: Final Concept - 3D Rhino Transformation
fig.8: Final Model - 3D Rendering # fig.9: Printed Model - Bottom View # fig.10: Printed Model - Perspective View # fig.11: Printed Model - Top View

fig.1

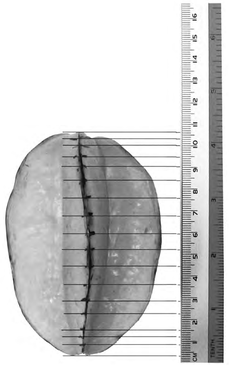


fig.2

fig.3

fig.4

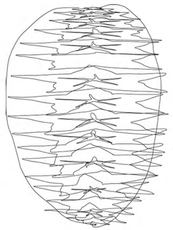
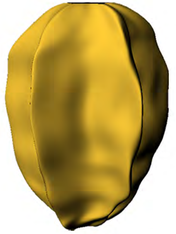


fig.5



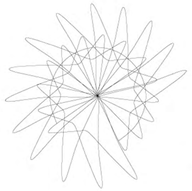


fig.6

fig.7

fig.8

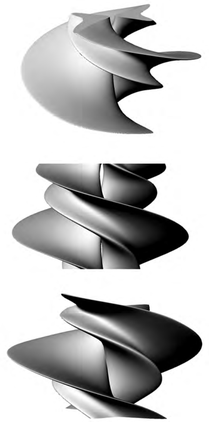


fig.9

fig.12

fig.10

fig.11

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2008 - Assist.Prof. Fabrizio Galli - Student Anchit Malhotra

 # fig.1: Star Fruit - Scale 1:1 - Dimension mm.107 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections # fig.4: Sections - 2D Graphic Reconstruction # fig.5: 3D Rhino Model Reconstruction # fig.6: Sections - 3D Rhino Transformation Process # fig.7-8: 3D Generative Elix Shape # fig.9: Double Elix # fig.10-11-12: Final Output Rapid Prototyping Model

fig.1

fig.2

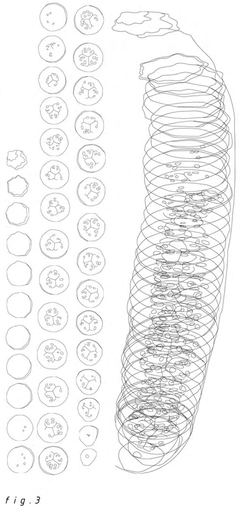


fig.3

fig.4

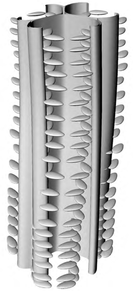


fig.5

fig.6

fig.7

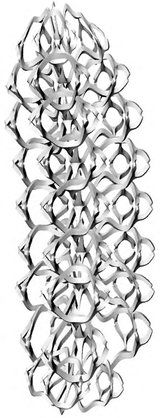


fig.8

fig.9

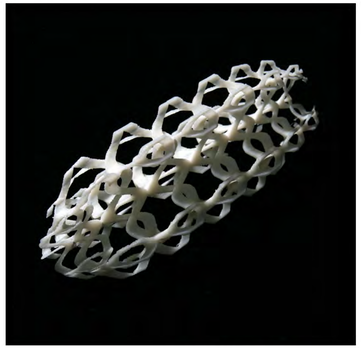


fig.10

fig.11

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2011 - Student Yosephine Leosaputro

 # fig.1: Yellow Zucchini - Scale 1:1 - Dimension mm.220 # fig.2: Points & Sections - Photoscan # fig.3: Sections - 2D Graphic Reconstruction # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Rhino Transformation Process # fig.7: 3D Rhino Transformation Process # fig.8: 3D Rhino Transformation Process # fig.9: Rendering # fig.10: Final Output Image # fig.11: Final Output Image # fig.12: Final Output Image

fig.1

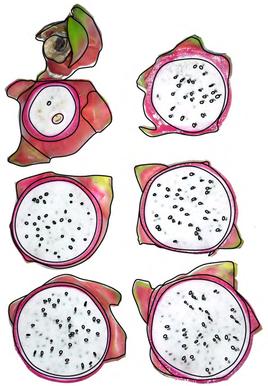


fig.2

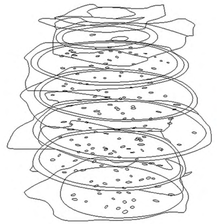


fig.3

fig.4

fig.6

fig.8

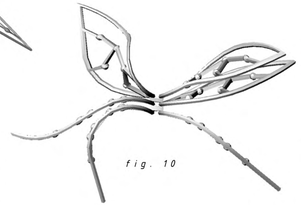


fig. 10

fig.5

fig.7

fig.9

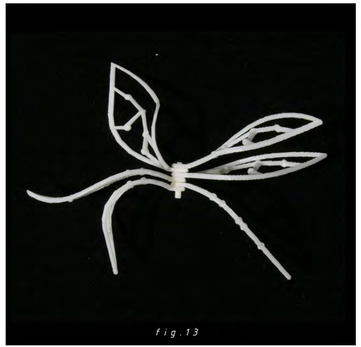


fig.13

fig.11

fig.12

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2011 - Student .....

 # fig.1: Dragon fruit - Scale 1:1 - Dimension mm.190 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:0.8 # fig.4: 3D Rhino Model Reconstruction # fig.5 - 9: 3D Rhino Transformation Process & 3D Renderings # fig.10: Final 3D Rendering
 # fig.11: Final Output Image # fig.12: Final Output Image # fig.13: Final Output Image

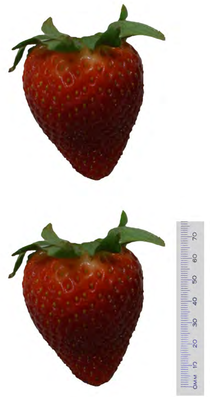


fig.1

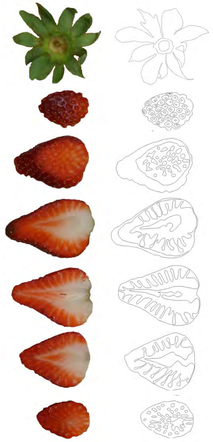


fig.2

fig.3

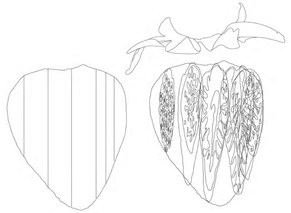


fig.4

fig.5

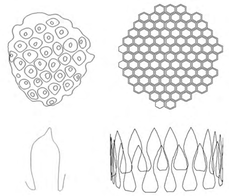


fig.6

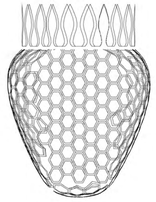


fig.7

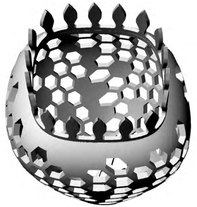
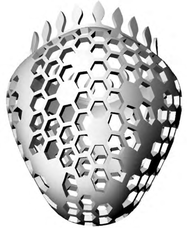
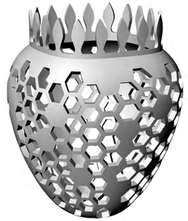


fig.8





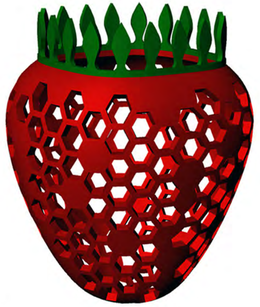


fig.9

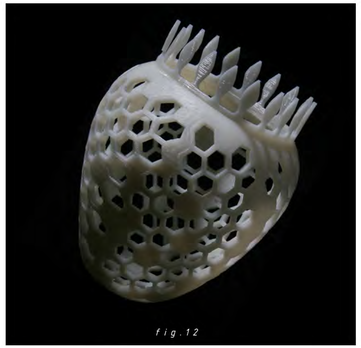


fig.12

fig.10

fig.11

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2011 - Chiang Ching Shan

 # fig.1: Strawberry - Scale 1:1 - Dimension mm.67 # fig.2: Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Renderings # fig.6: Pattern Transformation Process # fig.7: Wireframe of Model
 # fig.8: 3D Rhino Transformation Process # fig.9: Final 3D Rendering # fig.10: Final Output Image # fig.11: Final Output Image # fig.12: Final Output Image

fig.1

fig.2

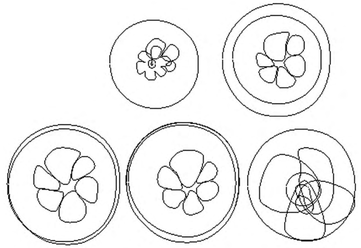


fig.3

fig.4

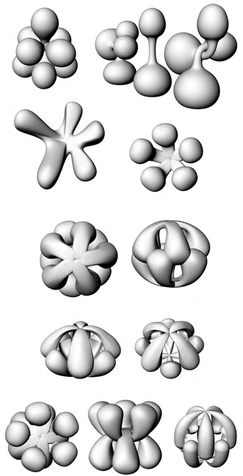


fig.5

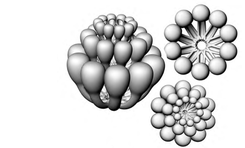


fig.6

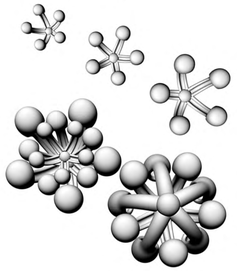


fig.7

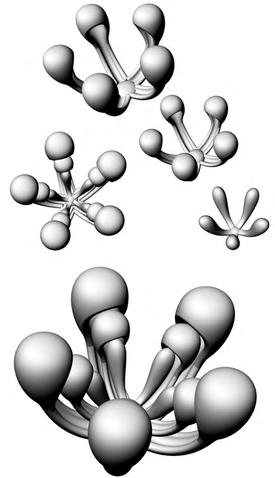


fig.8

fig.11

fig.9

fig.10

from Natural to Artificial – PR0330 – Advanced Form Workshop – Fall 2011 – Nurul Husna Ngaliman

 # fig.1: Mangosteen – Scale 1:1 – Dimension mm.80 # fig.2: Points & Sections – Photoscan – Scale 1:1 # fig.3: Sections – 2D Graphic Reconstruction – Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process: Exploration of the round form # fig.6: 3D Rendering: Manipulation & Multipl of Units # fig.7: Testing of Final Outcome # fig.8: Final Output Image in 3D Rendering : Mother Mangosteen # fig.9: Final Output Image # fig.10: Final Output Image # fig.11: Final Output Image # fig.12: Final Output Image

fig.1

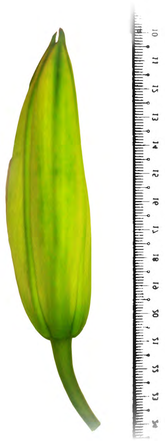


fig.2

fig.3

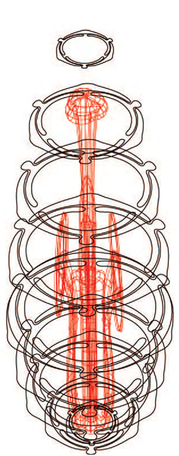


fig.4

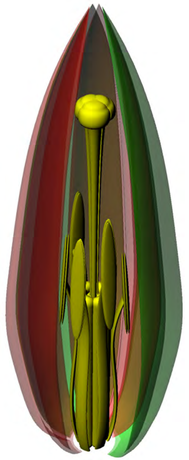


fig.5

fig.6

fig.7

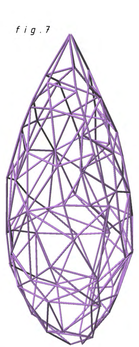
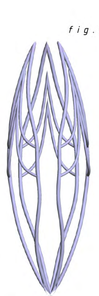


fig.8

fig.9

fig.10



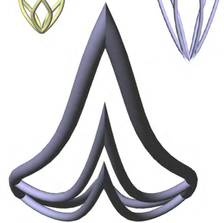


fig.11

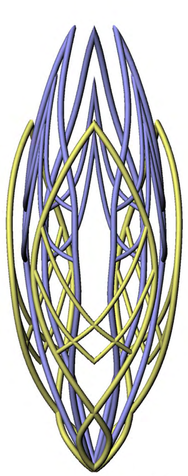


fig.12

fig.15

fig.13

fig.14

from Natural to Artificial
- PR0330
- Advanced Form Workshop - Fall 2011
- Nicholas Ong Thian Chai

fig.1: Lily Bud in stalk # fig.2: Lily Bud - Scale 1:1 - Dimension mm.140 # fig.3: Points & Sections - Photoscan - Scale 1:1 # fig.4: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.5: 3D Rhino Model Reconstruction # fig.6 & 7: 3D Rhino Transformation Process
fig.8,9,10 & 11: 3D Rhino Transformation Process Details # fig.12: Rendered View # fig.13,14 & 15 : Finished Output Image

fig.1

fig.2

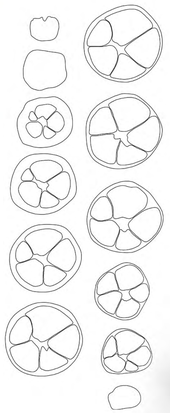


fig.3

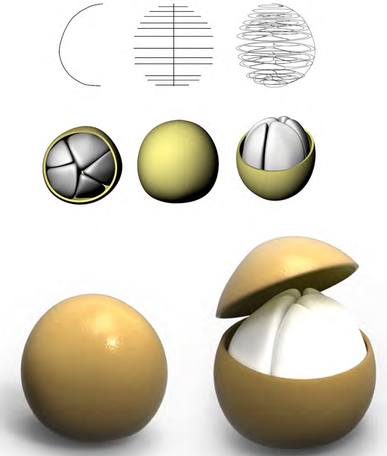


fig.4

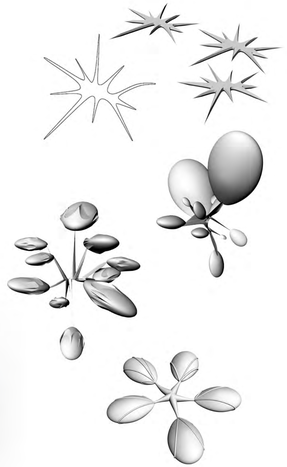


fig.5

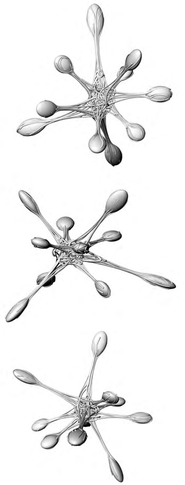


fig.6

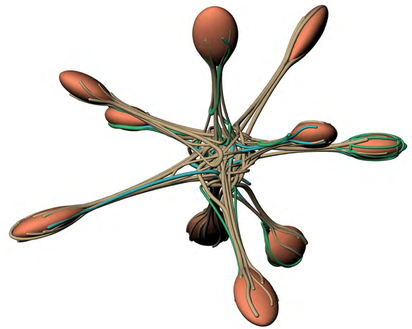


fig.7

fig.10

fig.8

fig.9

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2011 - Wee Yen Lynn

 # fig.1: Duku - Points - Scale 1:1 - Dimension mm.37 # fig.2: Sections - Photoscan - Scale 1:1 # fig.3: Sections - 2D Graphic Reconstruction - Scale 1:1 # fig.4: From Outlines - 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Renderings # fig.7: Final 3D Rendering
 # fig.8: Final Output Image # fig.9: Final Output Image # fig.10: Final Output Image

fig.1

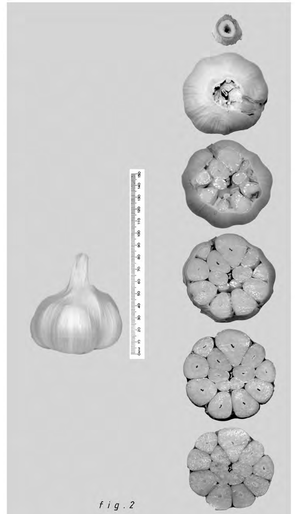


fig.2

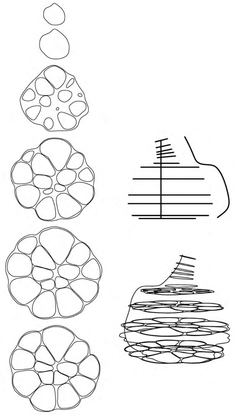


fig.3

fig.4

fig.5

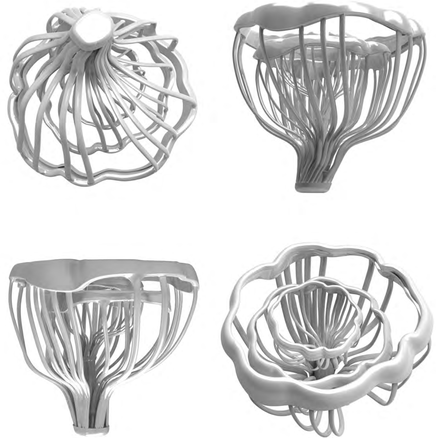


fig.6

fig.7

fig.8

fig.9

from Natural to Artificial – PR0330 – Advanced Form Workshop – Fall 2011 – Tay Zane Eston

 # fig.1: Garlic – Dimension 140x110mm # fig.2: Points & Sections – Photoscan # fig.3: Sections – 2D Graphic Reconstruction # fig.4: 3D Rhino Model Reconstruction # fig.5: 3D Rhino Transformation Process # fig.6: 3D Renderings # fig.7: Final Output Image # fig.8: Final Output Image # fig.9: Final Output Image

fig.1

fig.2

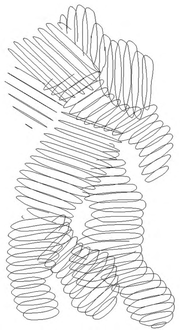


fig.3

fig.4

fig.5

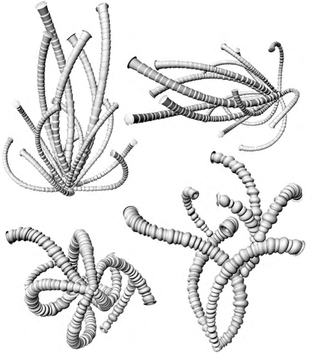


fig.6

fig.7

fig.10

fig.8

fig.9

from Natural to Artificial - PR0330 - Advanced Form Workshop - Fall 2011 - Cindy Wiryadi

 # fig.1: Ginger - Scale 1:1 - Dimension mm.200 # fig.2: Points & Sections - Photoscan - Scale 1:1 # fig.3: Sections - 3D Graphic Reconstruction - Scale 1:1 # fig.4: 3D Rhino Model Reconstruction # fig.5: 2D Sketches # fig.6: 3D Rhino Transformation Process # fig.7: 3D Renderings
 # fig.8: Final Output Image # fig.9: Final Output Image # fig.10: Final Output Image

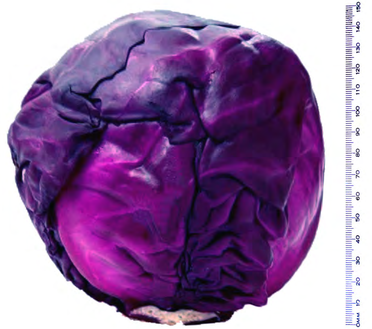


fig.1

fig.2

fig.3

fig.4a

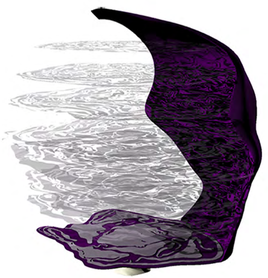


fig.4b

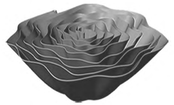


fig.5a

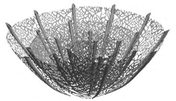


fig.5d

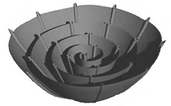


fig.5b

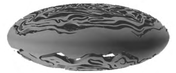


fig.5e

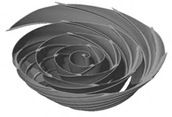


fig.5c

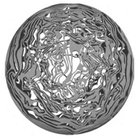


fig.5f

fig.6a

fig.6b

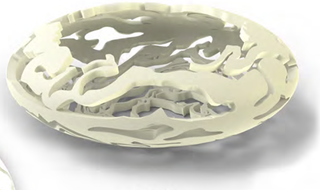


fig.6c

fig.9

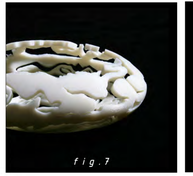


fig.7

fig.8

from Natural to Artificial – PR0330 – Advanced Form Workshop – Fall 2011 – Aaron Lim Zhe Yu U0931107J

fig.1: Red Cabbage – Scale 1:1 – Dimension mm.150 # fig.2: Points & Sections – Top View Photoscan – Scale 1:5 # fig.3: Top View Vector Sections – 2D Graphic Reconstruction – Scale 1:5 # fig.4a-b: 3D Rhino Model Reconstruction # fig.5a-f: 3D Rhino Transformation Process # fig.6a-c: 3D Renderings # fig.7: Final Output Image
fig.8: Final Output Image # fig.9: Final Output Image