

SUMMER INTERNSHIP AT SFO TECHNOLOGIES

Cochin Special Economic Zone,

Cochin, Kerala

10/05/2013 to 15/06/2013

ALVIN P GOPAL

Mobility and Vehicle Design

Roll No - 126390009

IDC,IIT Bombay

Introduction



The SFO Technologies, a NeST Group Company is a highly diversified business group, operating in the areas of

- Electronics & fibre optics
- Software
- Industrial design
- Value engineering
- Manufacturing Services
- Systems Integration.

Projects

Project 1

Packaged drinking water bottle design 500 ml for NeST Group.

- Area of work – Product design

Project 2

Packaged drinking water bottle design 1 litre for NeST Group.

- Area of work – Product design

Project 3

PoS Lottery Terminal for Playwin, Essel Group.

- Area of work – Value engineering

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PROJECT 1

PACKAGED DRINKING WATER BOTTLE DESIGN 500 ml

Client – Nest Group
Time period - May 2013

Theme

Human couple embracing shape

Design consideration

The design must follow the given requirements

- **Abstract** shape depicting embracing couple.
- Should be **suitable for blow moulding** using existing pre-forms (PET).
- Should be encapsulated in **a smooth contoured** shape to enable easy blowing.
- The shape should not be narrower than the size of the neck.

Some existing bottles with special themes



Mood and trend



Uniqueness



Love



Party

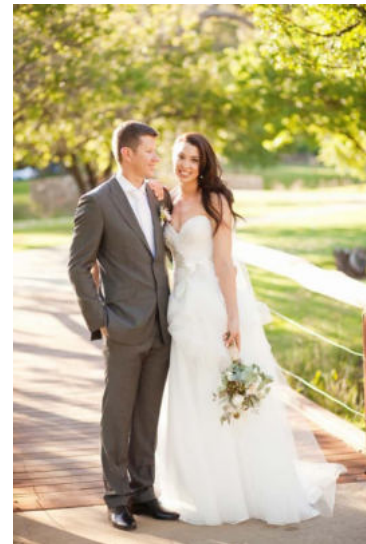
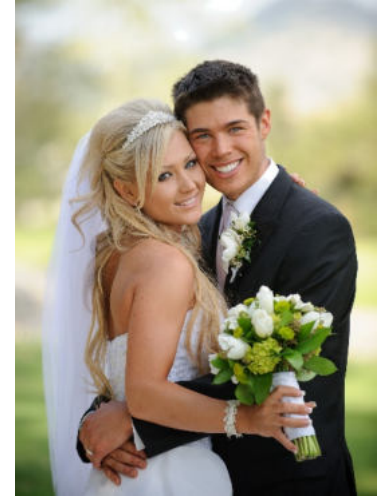


Joy

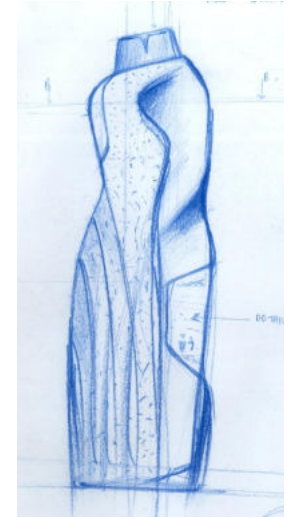


Elegant

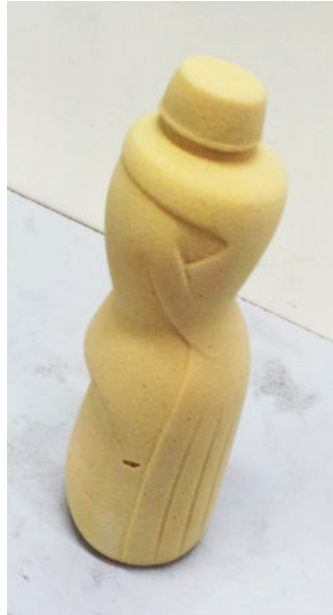
Inspiration



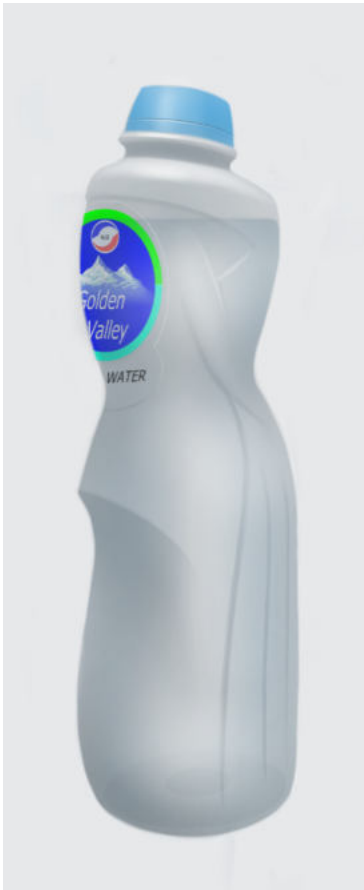
Ideation sketches



Mock-up model (PU)



Final renders



Rendered using Autodesk
Sketchbook Pro 2013

Features



- Clearly abstracted, the character of embracing couple.
- Unique and trendy form
- smooth contoured shape
- Easy holding is possible
- Inclination of neck with body axis help for easy drinking
- The character lines and contours adds to the strength



More detailing

- Simple but stylish graphical features
- More freshness



PROJECT 2

PACKAGED DRINKING WATER BOTTLE DESIGN 1 Litre

Client – Nest Group

Time period - May 2013

Project definition

Design a new concept for the Golden Valley water bottle.

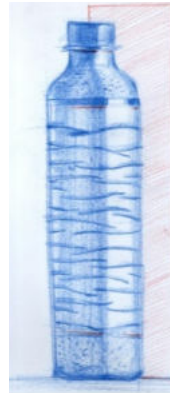
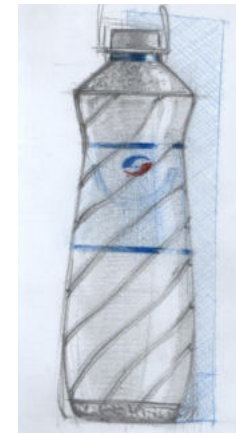
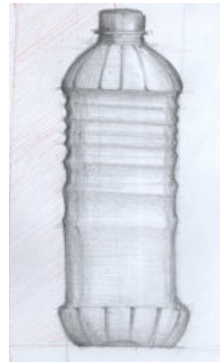
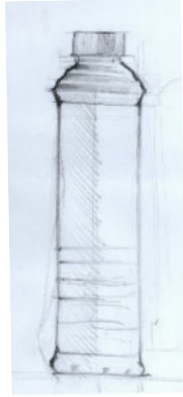
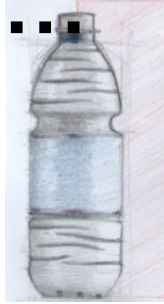
Design considerations

- Should have a unique shape
- Should be suitable for holding in the hand
-
- should be easy to stack
- Should be suitable for blow moulding
- Existing Golden Valley logo should be printed.

Inspiration



Ideation...



Final renders – Concept 1



Rendered using Autodesk
Sketchbook Pro 2013

Features

- Trendy design
- Simple and elegant looking shape
- More stable form
- Easy to hold
- Fresh looking
- More highlighting of branding
- Easy manufacturability



Continued...

- Easy packaging is possible
- Attractive and simple graphics pattern
- More colour options



Concept 2



Features

Same as the first concept, but with a new cap with flip opening system

- The curvy cap design is more matching to the bottle form
- The cap portion can be used to carry the bottle easily.



Colour variations



Concept – 3 , Features

- Fluidic but stable form
- Simple and elegant
- Easy to hold
- Easy manufacturability
- Easy packaging is possible
- Fresh looking
- The new cap design blending with the overall form
- Attractive and simple graphics



Colour variations.....



Concept 4



Feature

\$ Simple graphical features

- More brand identity

PROJECT 3

PoS Lottery Terminal

Client – Playwin, Essel Group

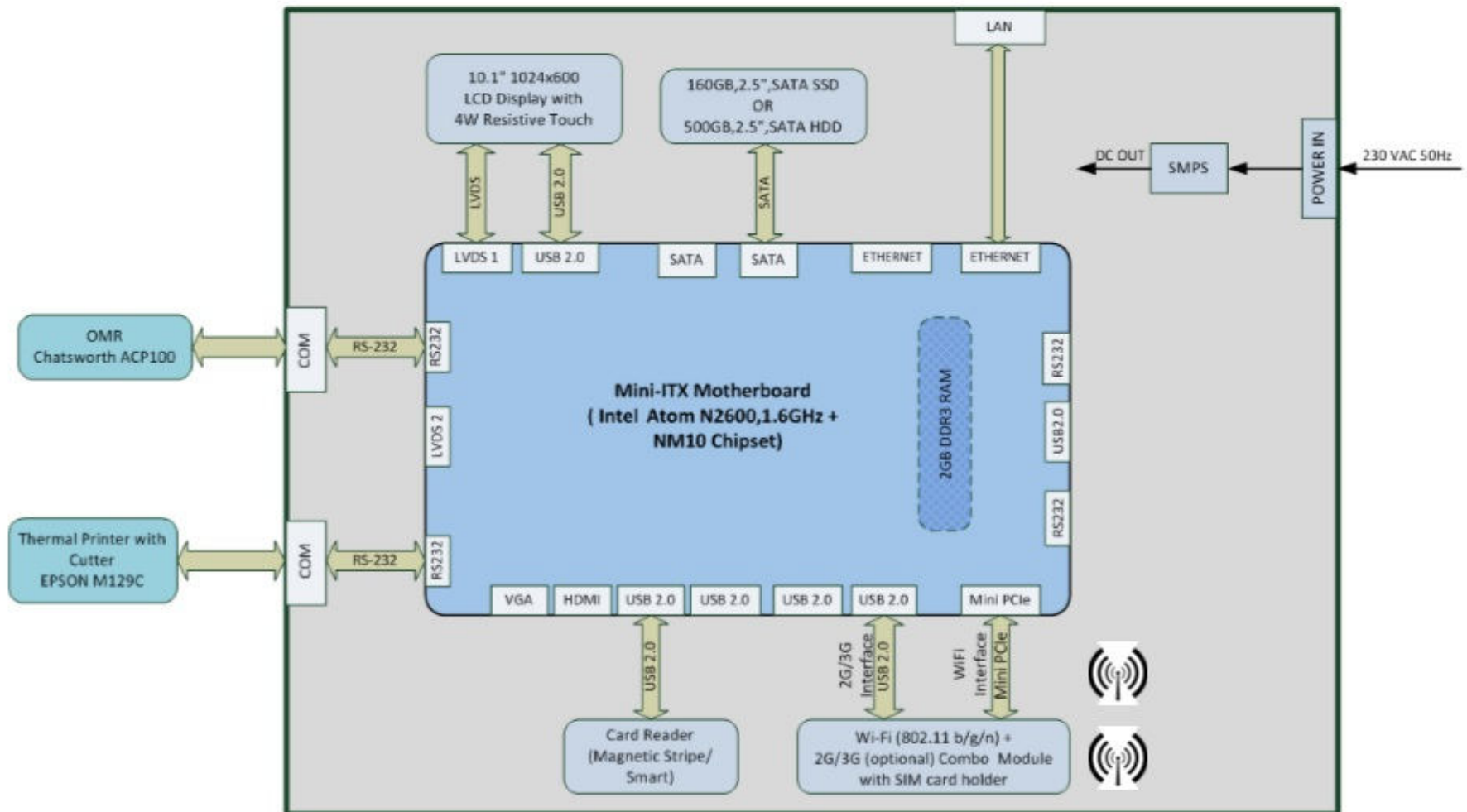
Time period - June 2013

Product Overview

Requirements for Essel Group are :

- Intel Atom processor , with dimension 170 mm x 170 mm
- 8"/10.4" Resistive Touch Screen
- OMR
- Magnetic Card Reader, Smart Card Reader, Contactless Card Reader
- Thermal printer
- Cutter – 2 ML cuts

Block level architecture proposed by SFO Technologies



Design considerations

- Should follow the specifications as per SFO Proposal
- New design should have a unique futuristic form
- should look like gaming/play equipment
- Internal parts can be re-arranged to match the form
- Ergonomics of UI areas to be considered

Existing terminal and it's drawbacks



- Conventional boxy design
- 335 W x 245 H x 315 T (mm)
- Top feeding of OMR paper reduces the visibility and is less ergonomic
- Lack of barcode as well as Master card reader.

- Unnecessary projections make the packaging difficult

Continued

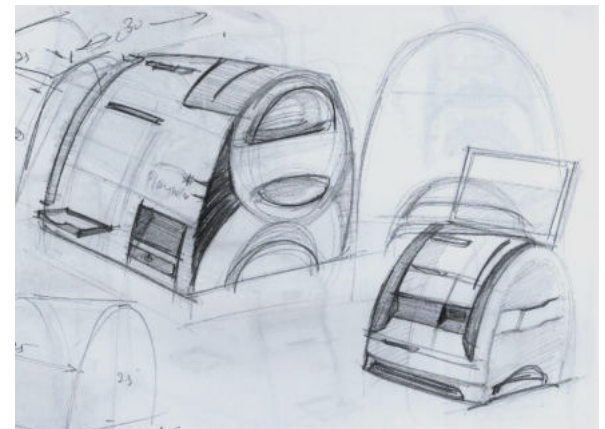
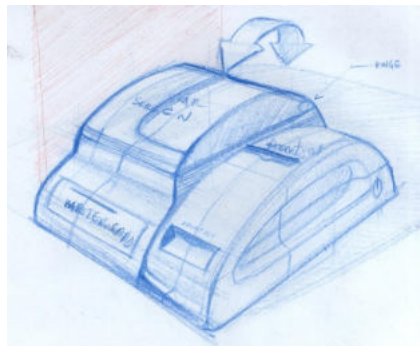
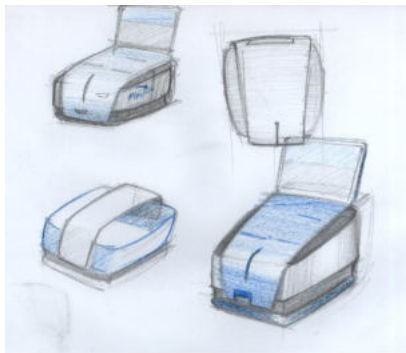
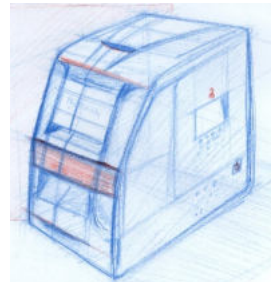
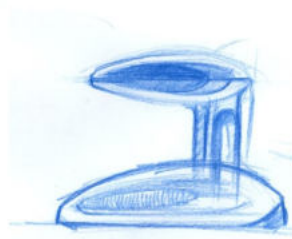
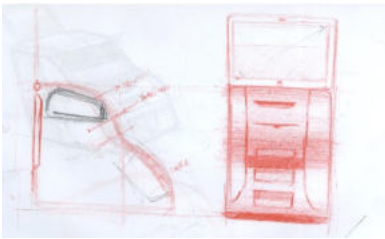
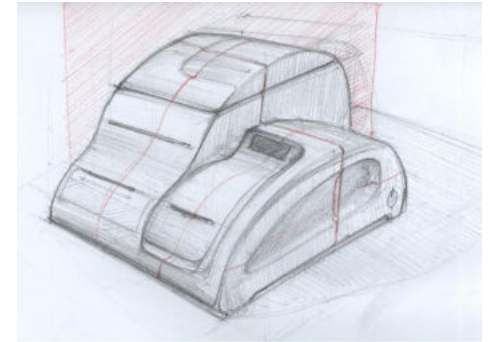
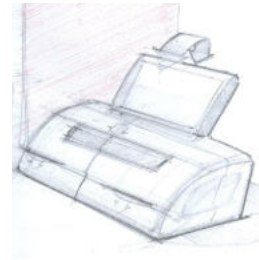
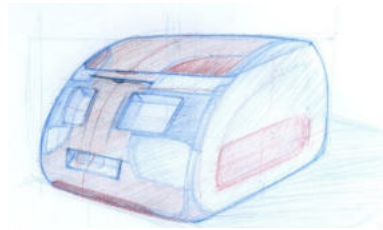
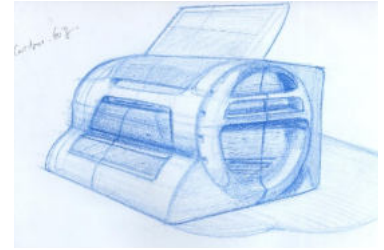
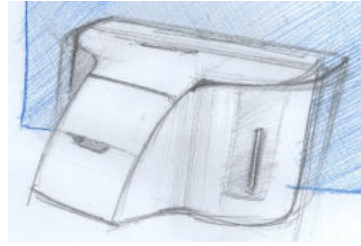
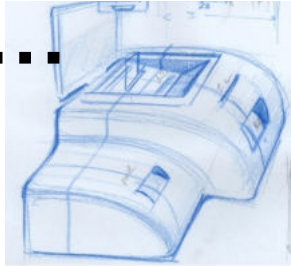
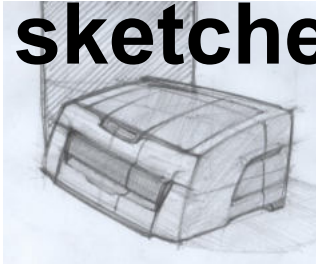
- Position of the print out point is less ergonomic.
- No provision for holding and raising the machine.
- rear side is messy and visible to the customer.
- Branding is too small.
- Out dated colour scheme.
- Screen is too small to view the details



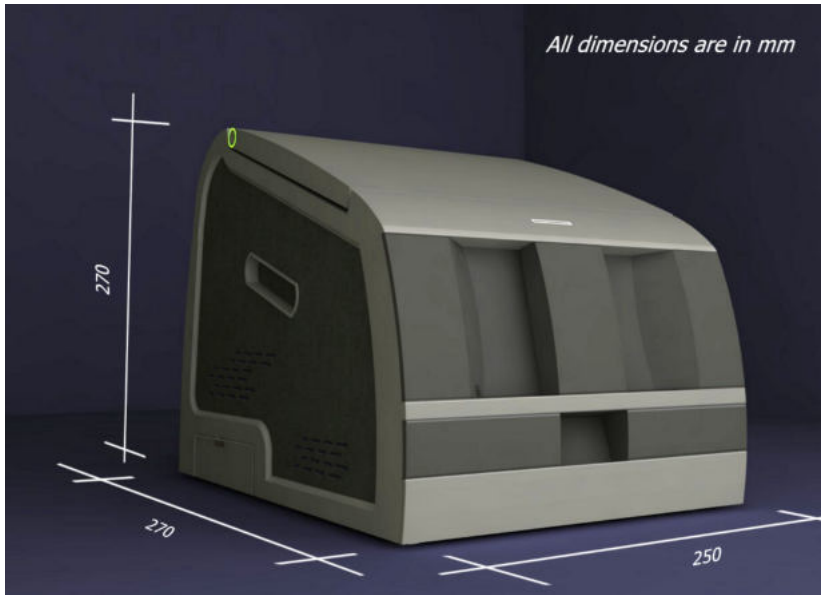
Other PoS Terminals in the market



Ideation sketches...



Concept 1



Features

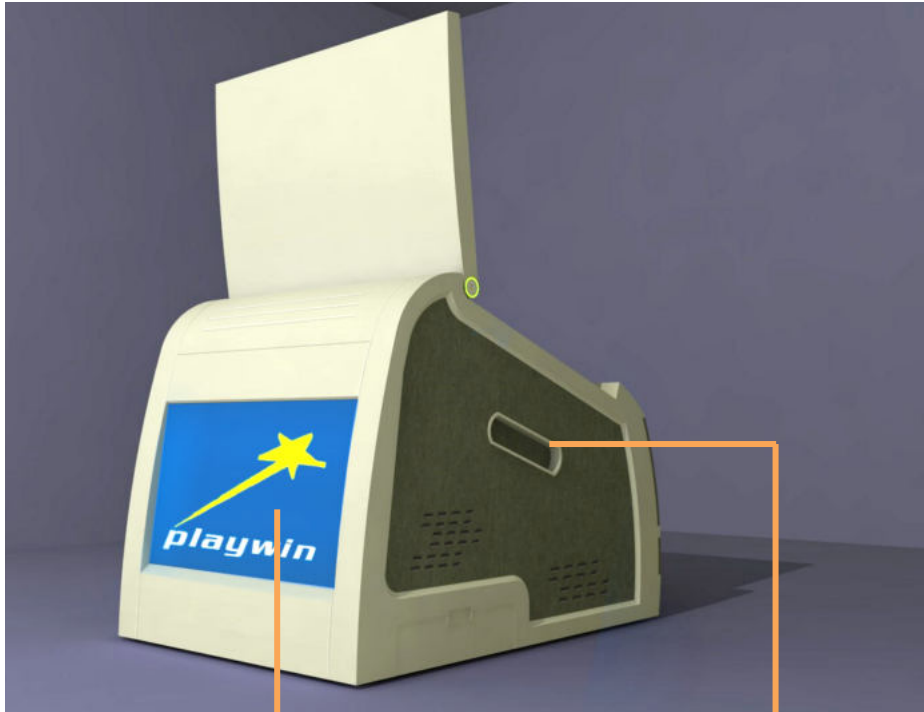
Compact

- More flow in design



- Integrated, foldable 10 inch screen offers more visibility and comfort
- Feel of more stability.
- Dual body colour is more attractive.

Features continued...



Extra rear display
area

Holding
aid



Barcode
reader

OMR scanner

Horizontal
loading

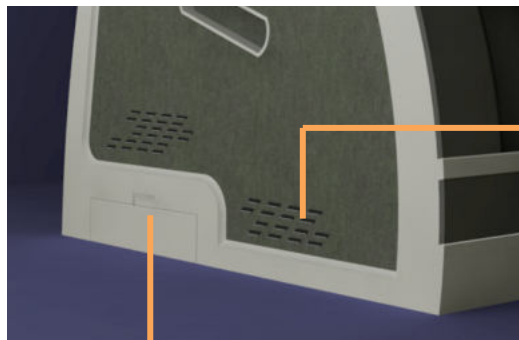
*** Modelled using Google Sketch Up and rendered using
V Ray

Features continued...

Print out slot

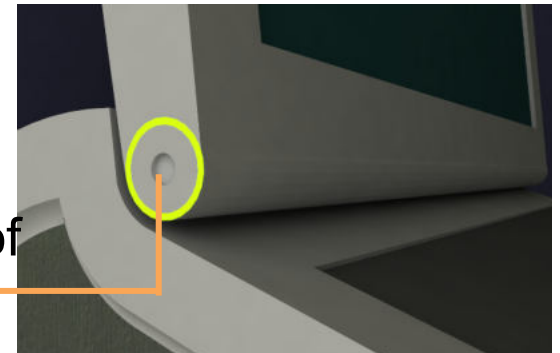


Master card reader



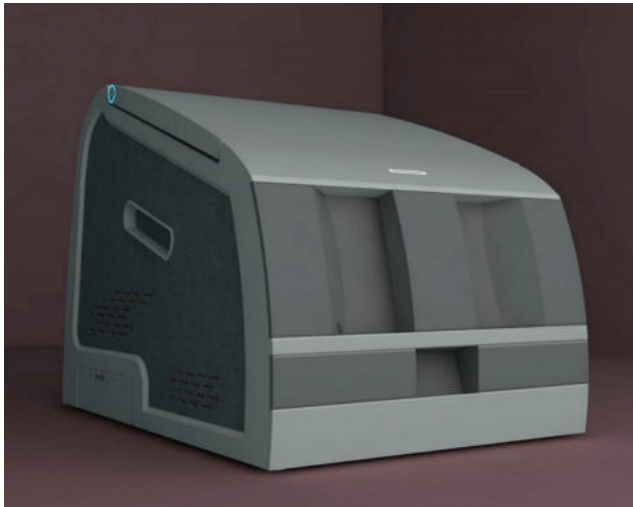
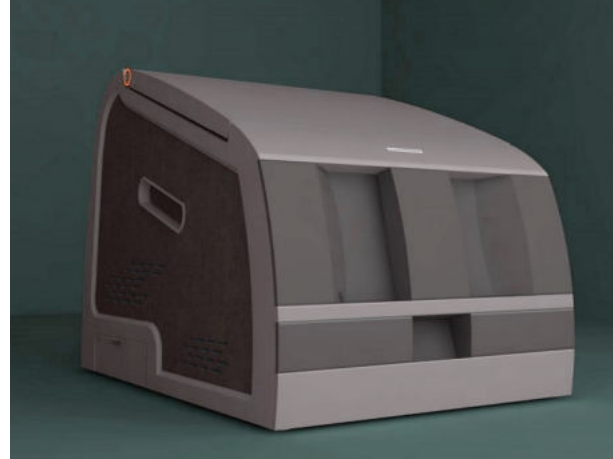
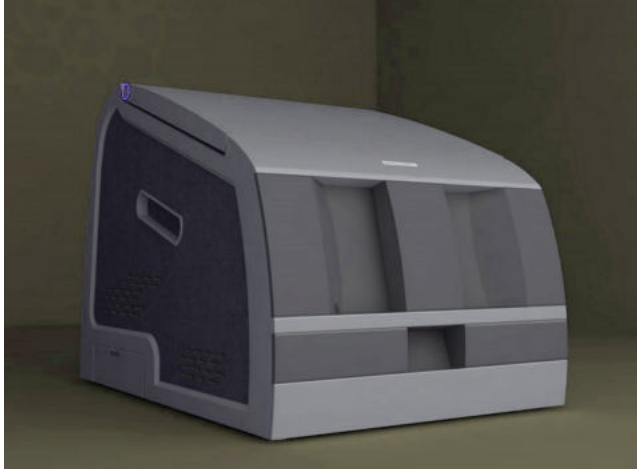
Vent holes

Power switch of monitor

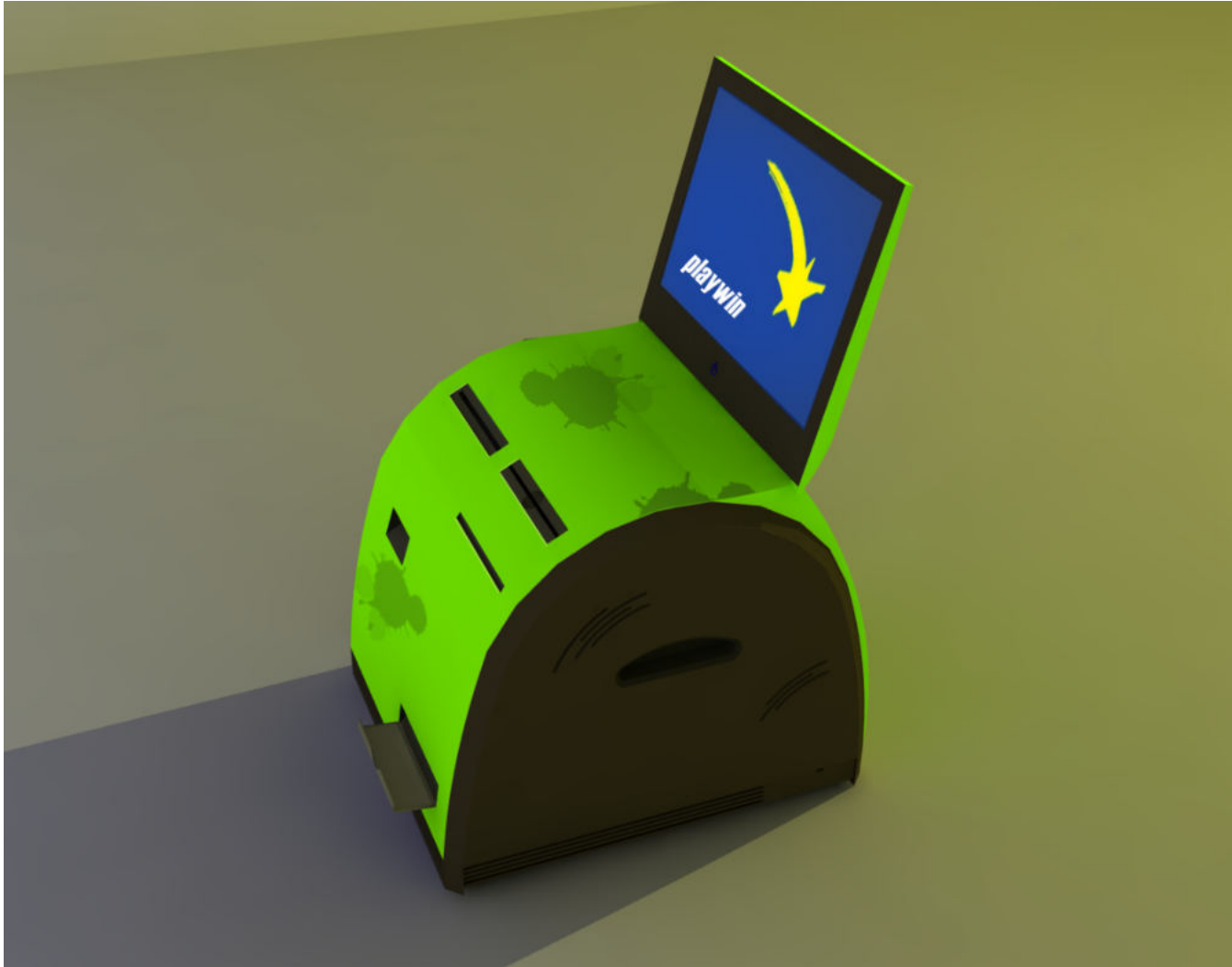


Cover of connectivity space

Colour options

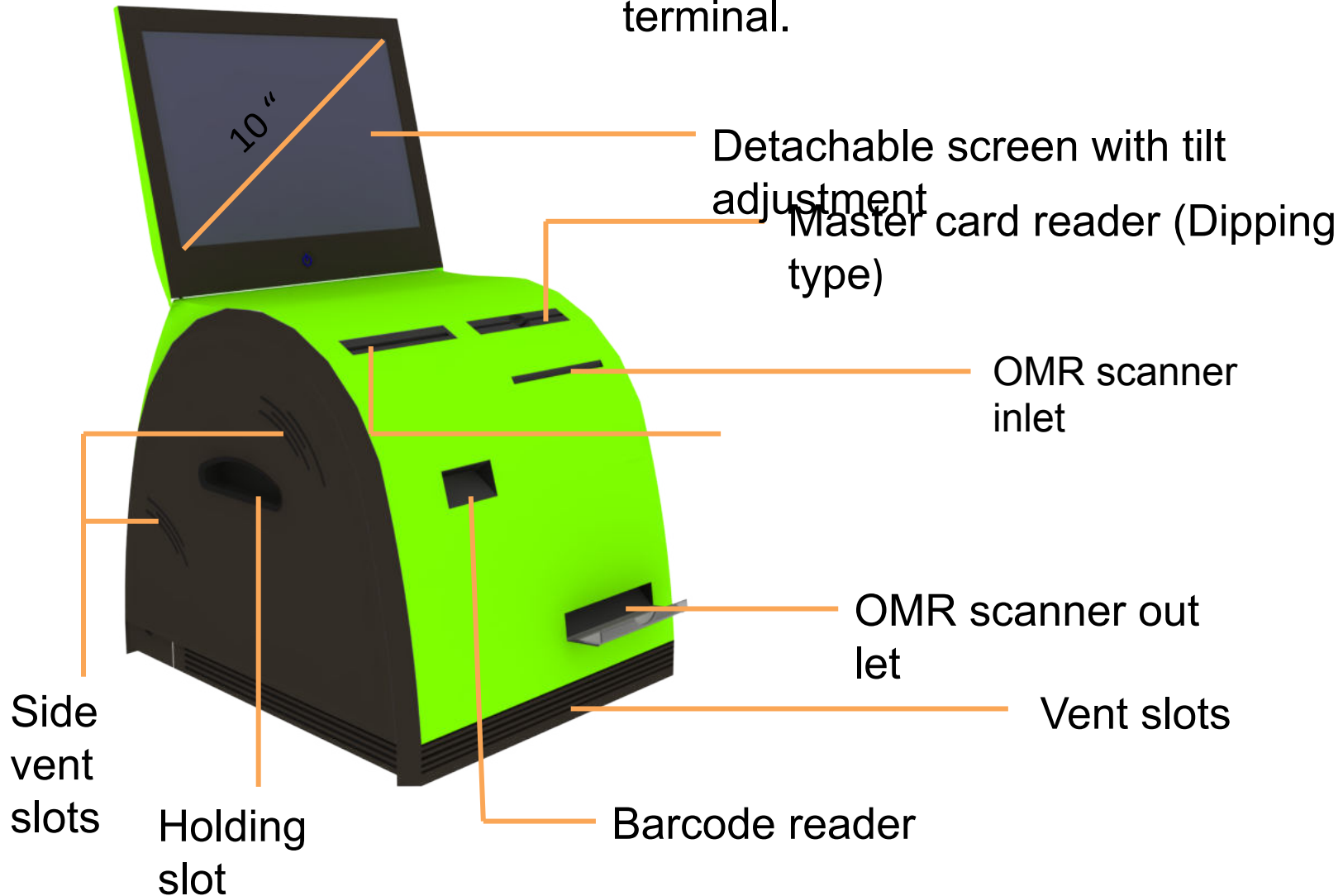


Concept 2



Features

*** All user interfaces are more ergonomic than in the existing terminal.

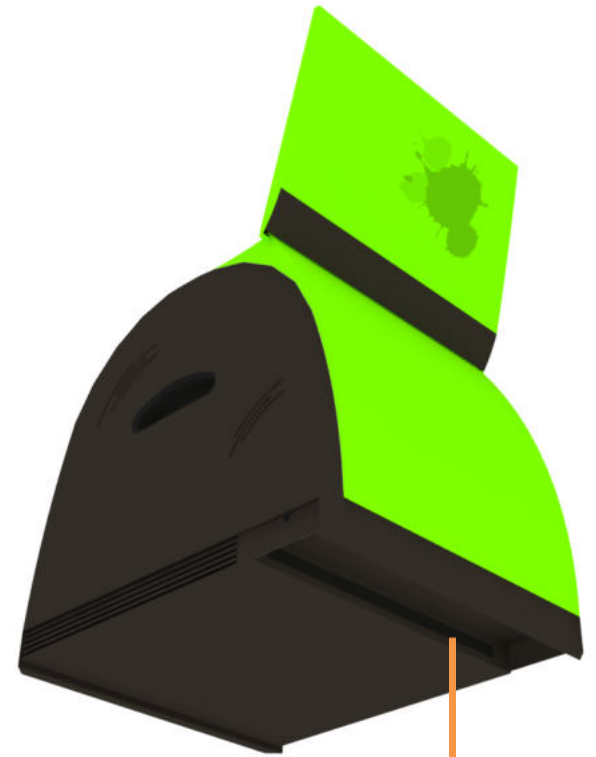


Features continued

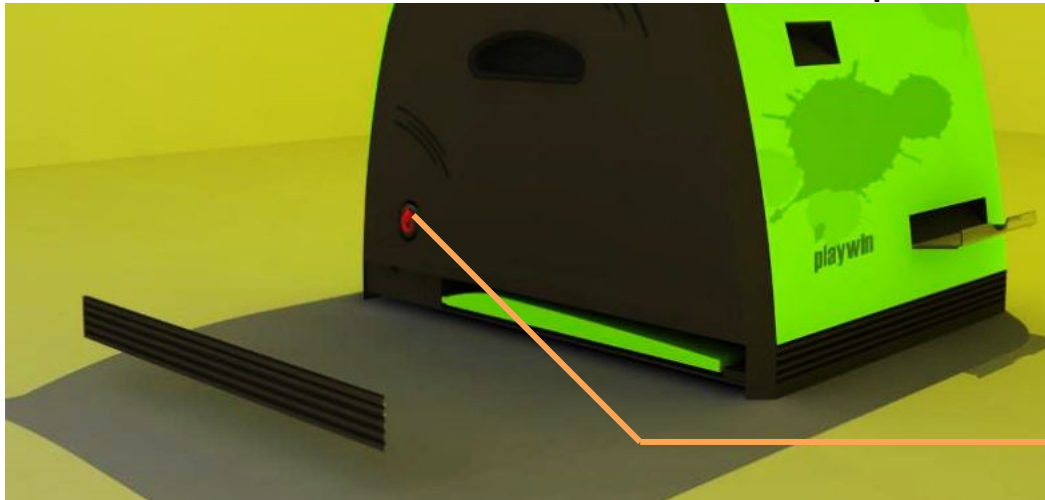


Lid

Connectiv
e
ports

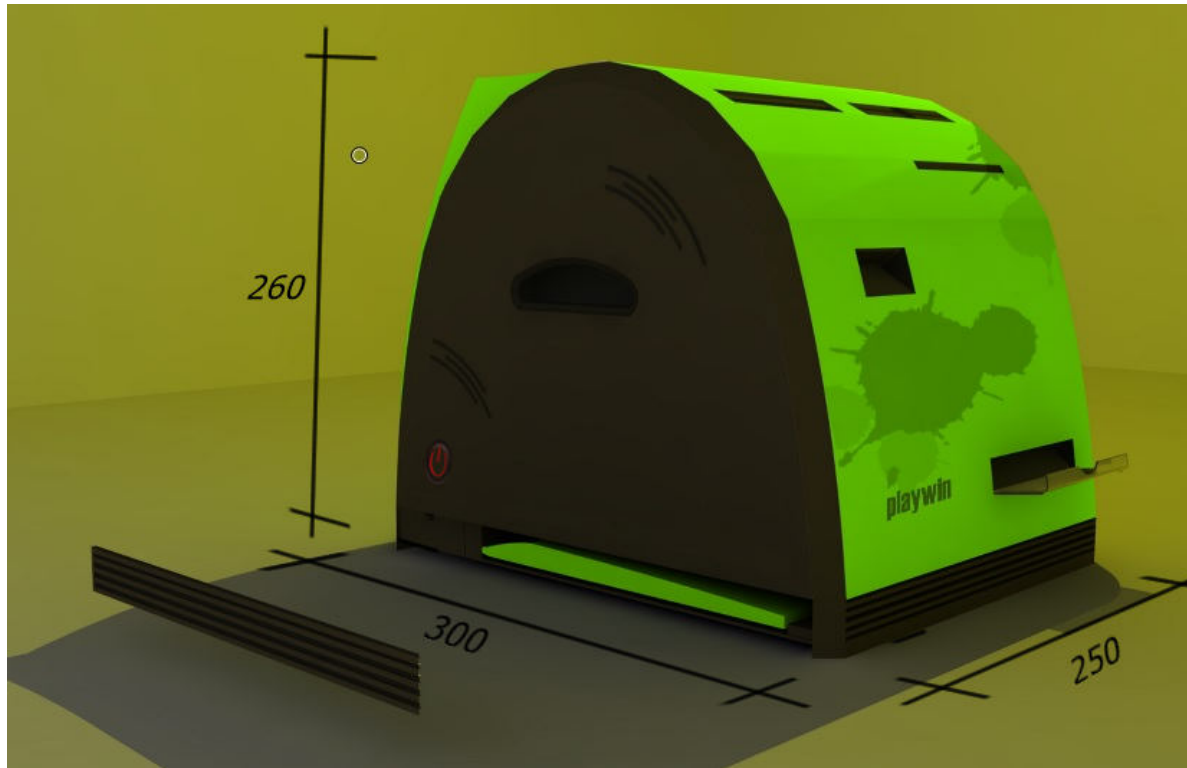


Connectivity
duct



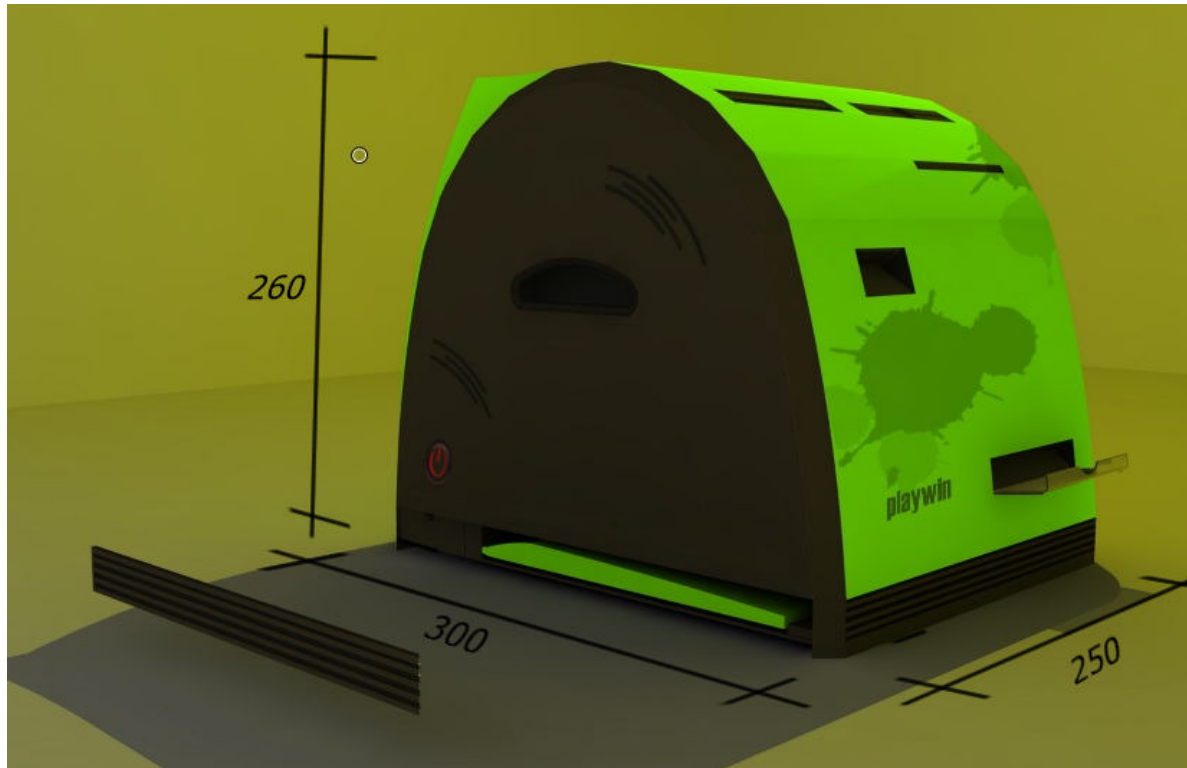
Power
switch

Dimensions and features



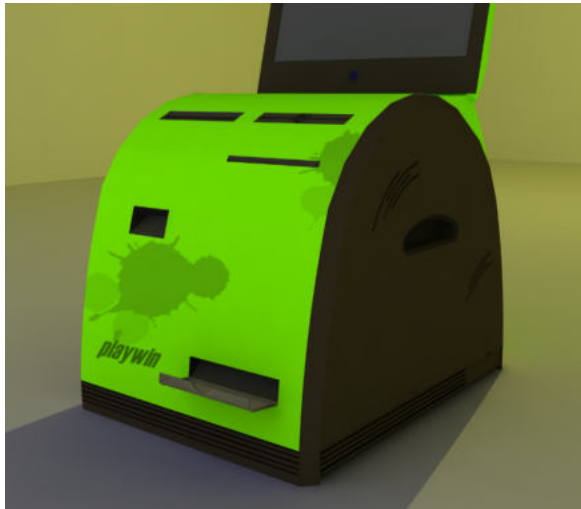
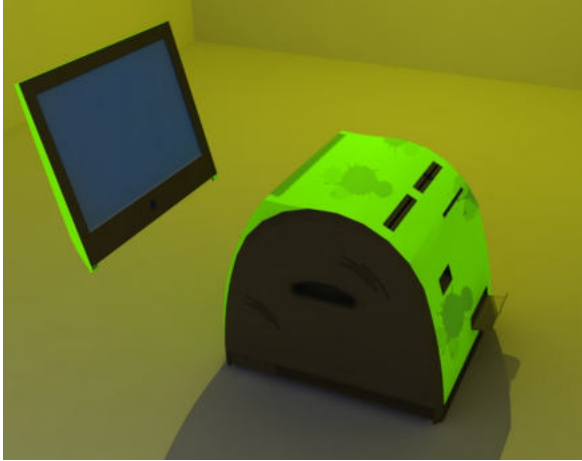
- Compact than the older design
- Curvy design is more trendy and interesting than the boxy one

Dimensions and features



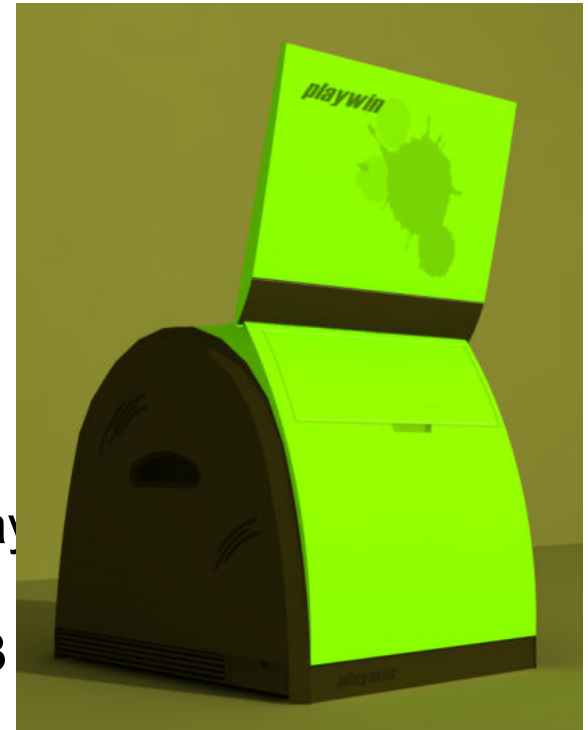
- Storage space for detached screen shows effective use of spaces
- Bright body colour impart more fun
- Graphical pattern gives the feel of more energy and thrill

Other views...



Rendered using V-Ray
and Autodesk
Sketchbook Pro 2013

Modelled using
Google Sketch
Up



Colour options



Thank you