

# making the transition from 2d to 3d ux designs

Benefits and pitfalls...

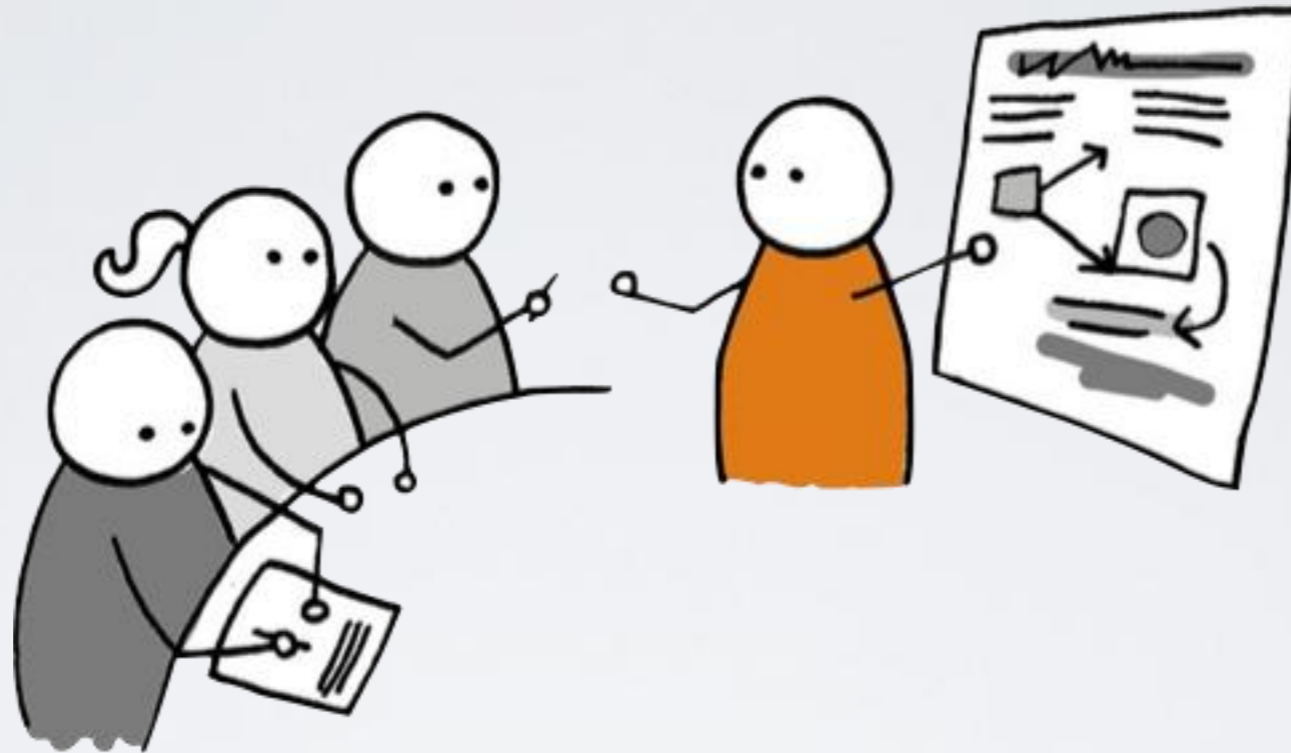
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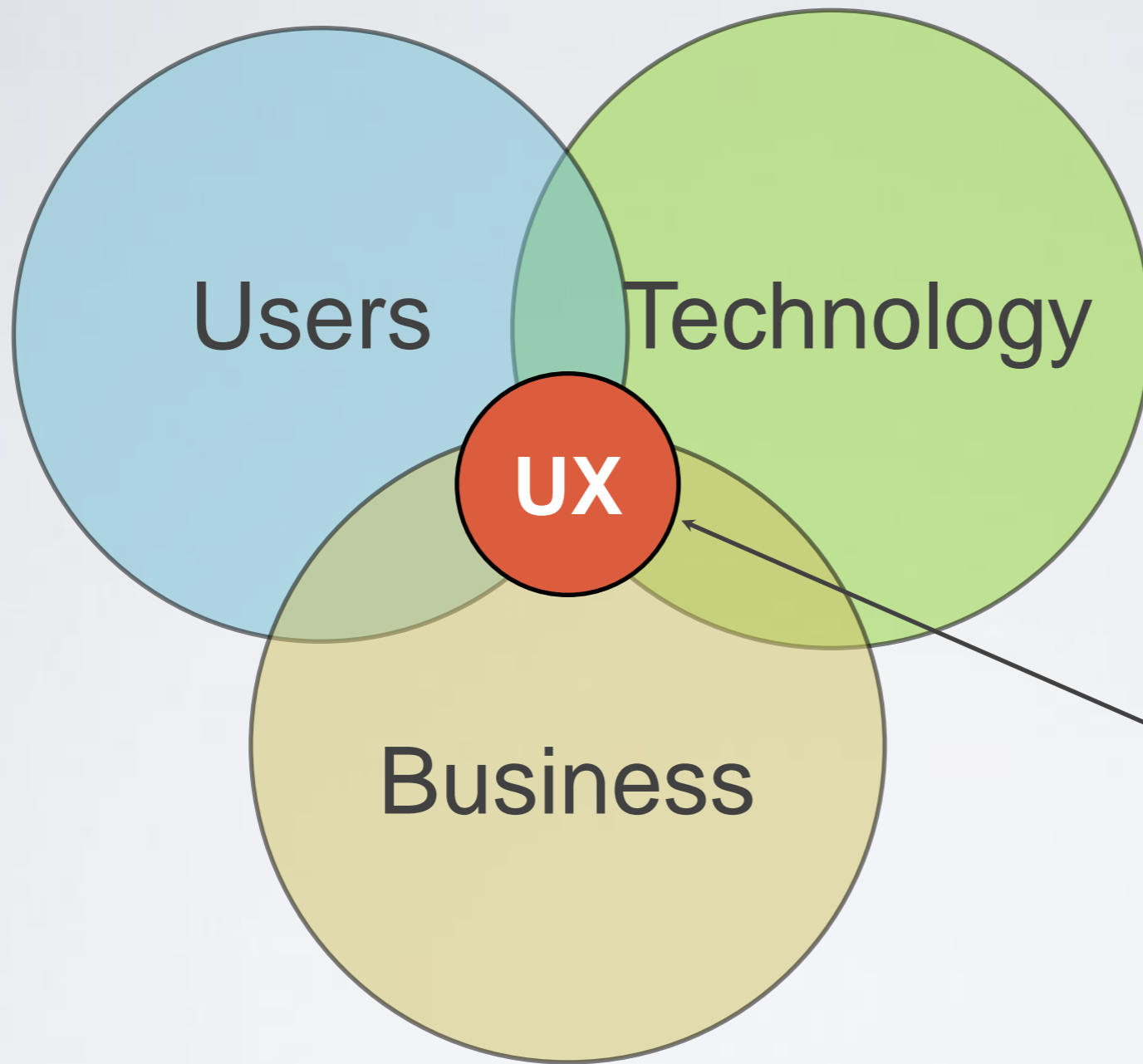
# Let's talk about...

- User Experience
- What is 3D UX design?
- Interaction model
- Benefits
- Pitfalls
- Conclusion

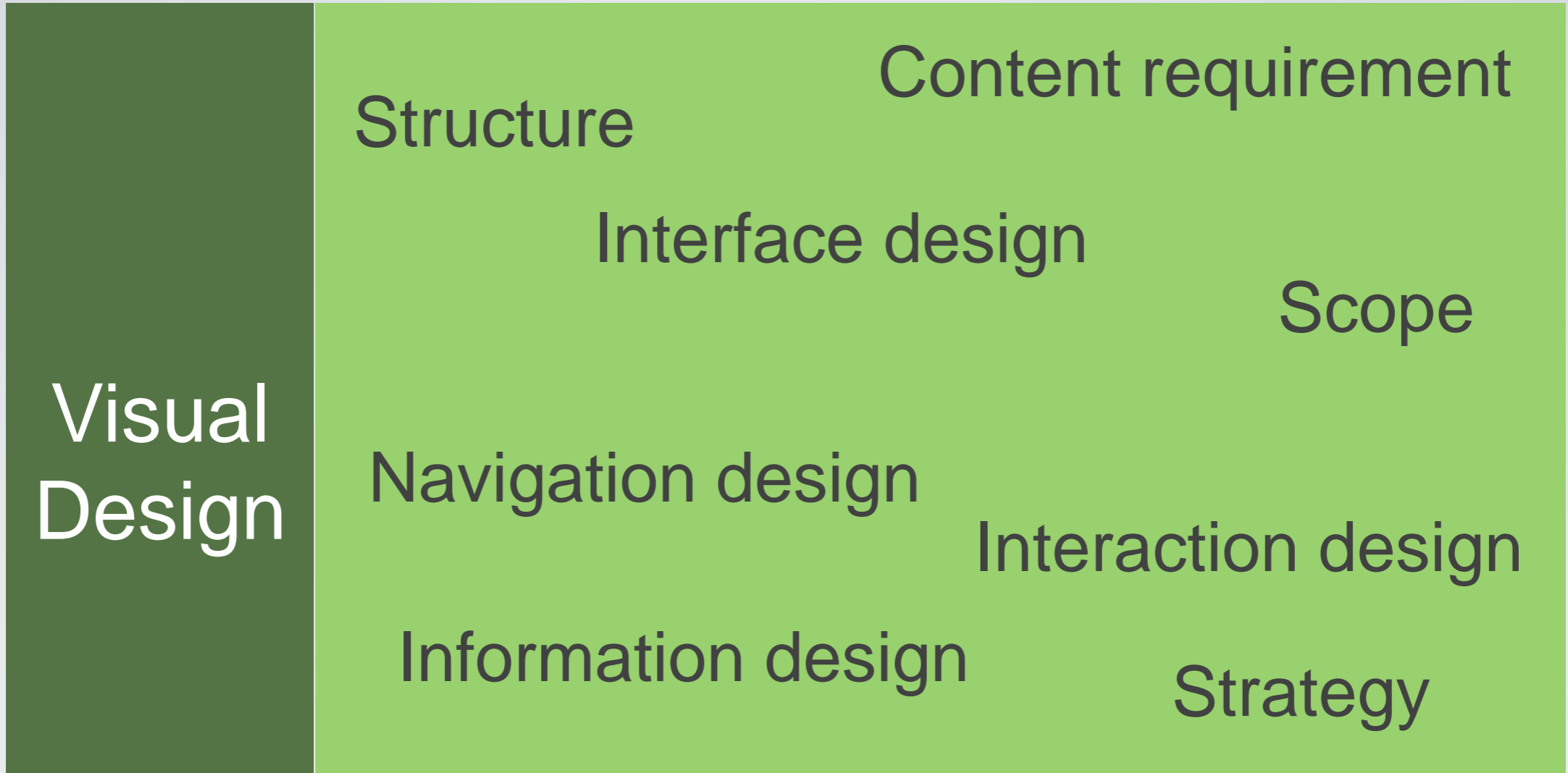


# UX - User experience

What is user User Experience and how can it help me to design fantastic 3D enabled products?



User Experience  
Sweet spot



10% + —————> 90% <———— =UX

**What we see is visual design!**

...But what we **don't see** is **90%**

# UX rules to keep in mind

- **Clear**

Keep your UI uncluttered (if it doesn't add to the UX don't put it in)

- **Minimal**

Remove anything that can be removed (don't be afraid of white space)

- **Responsive**

Let the UI converse with the user (give hints where possible)

- **Familiar**

Use familiar metaphors

- **Consistent**

Use consistent visual and interaction language across the application (don't break the paradigm)



# what is 3d UX design?

Most people's first thought would be:  
A spinning cube - "wow this is so 3D"!

Good design is obvious.  
Great design is  
transparent.

— Joe Sparano

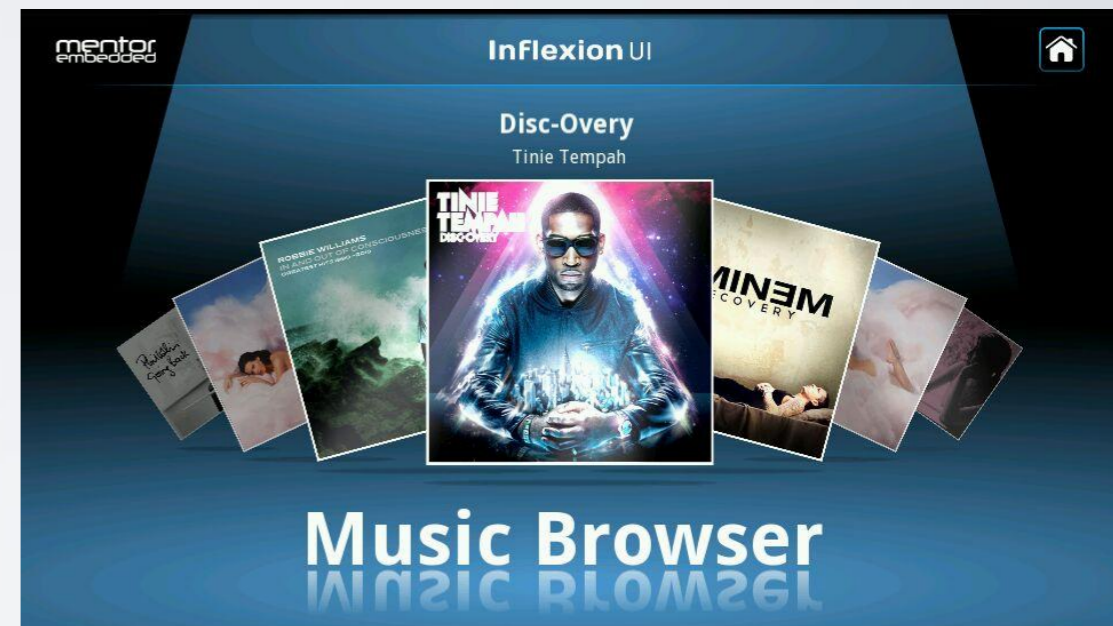
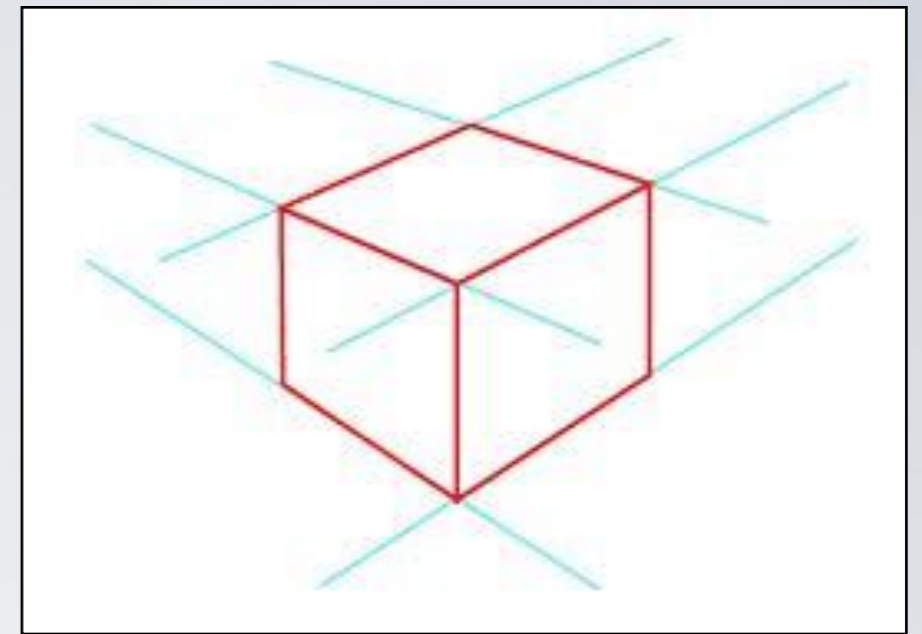
Bad design is  
smoke, while  
good design is a  
mirror.

— Juan-Carlos Fernández

Behavioural design is all about  
feeling in control. Includes:  
usability, understanding, but  
also the feel.

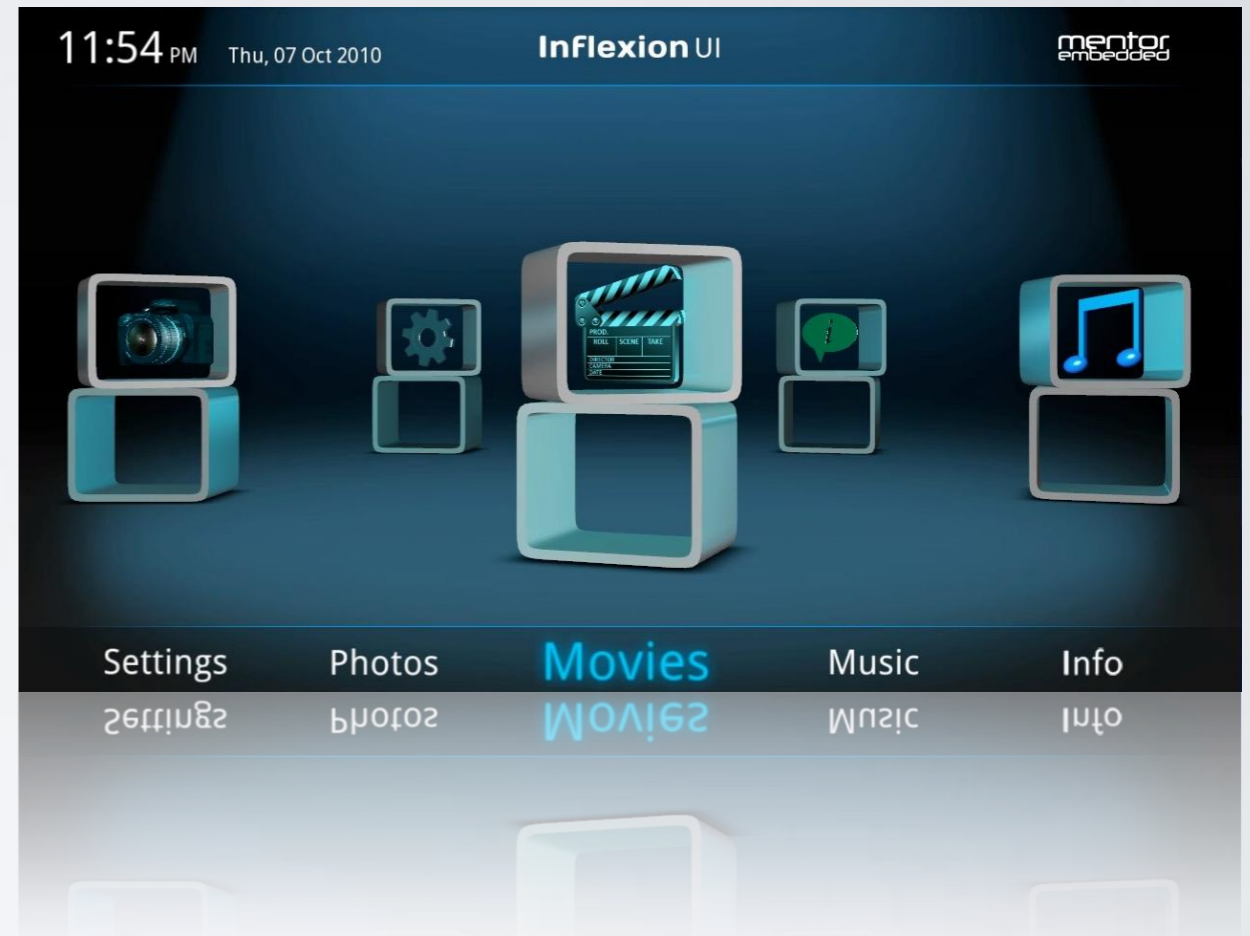
— Don Norman

- There are so much more to user experience design in 3D then standard cubes, boxes and other objects floating around in 3D space.
- Enhance the design by using light effects, mirror effects, shaders etc, this can give your design a sophisticated look and help the usability of your design - “not just adding depth to all objects” ...
- Z-order layer and/or interaction model. Interact with object that are further away then in a normal 2D design





- Its highly recommended to position graphics and other interaction objects within a structure to make sure that things just doesn't hang free and float around in the application space.
- Using a structure also allows the user to know where the interaction point starts and ends.





# Interaction model

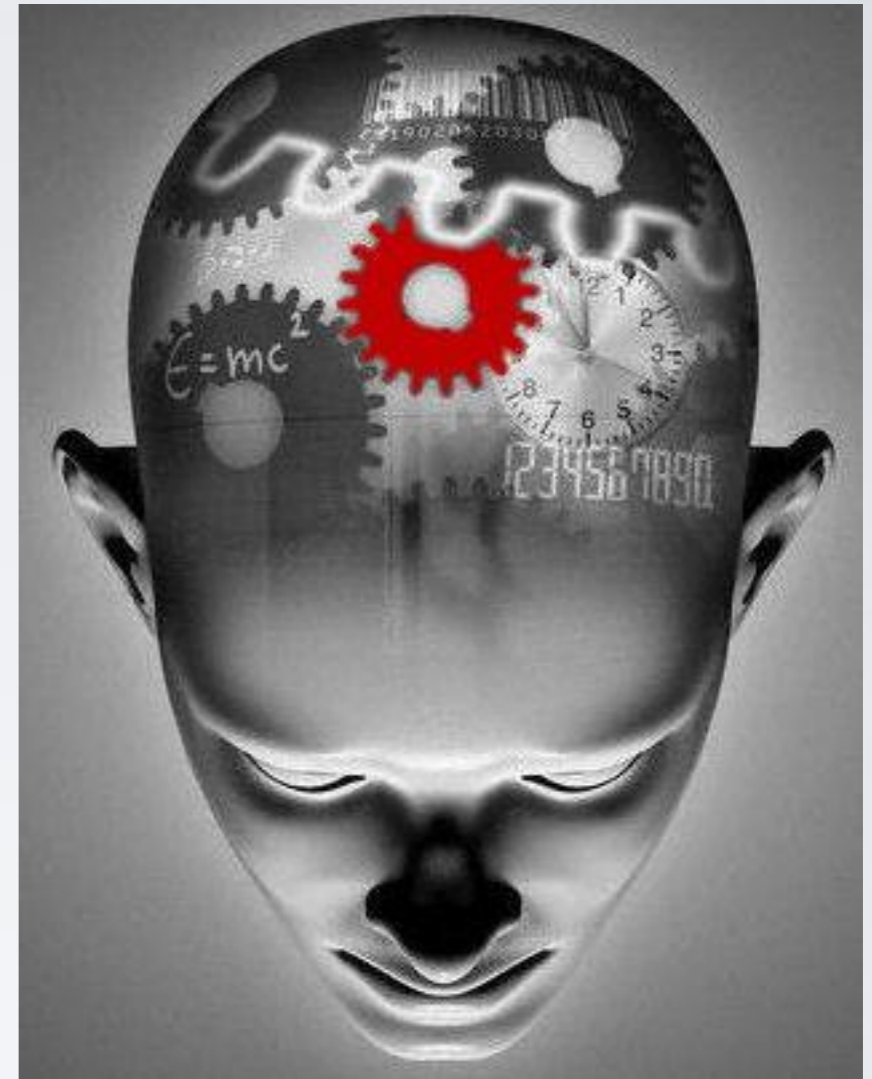
Even if we all live and act in a 3D world, the physical world contains many more clues and apparent constraints of what we can and cant interact with in most situations

- Most of today's users know how to interact with a touch-screen, thanks to the success of iPhone/Android and most designers know how to design touch affordable designs.
- However current 3D designs are either simple models, animations or lack usability e.g. they have been designed to look 3D but the interaction model is still linear and 2D. This may confuse the user who would compare it to a real world interaction model only to discover that it doesn't work...



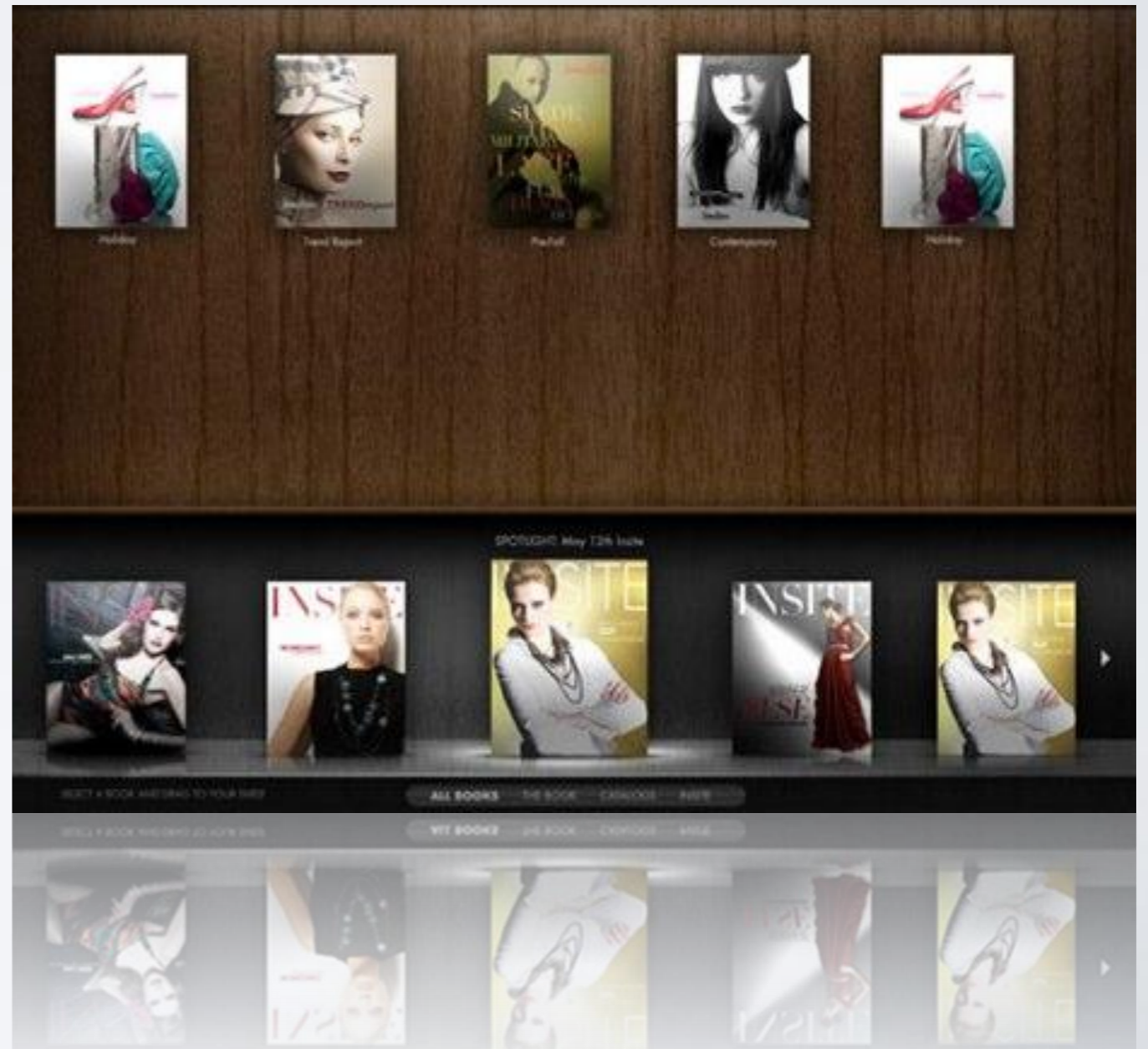
- I am not saying that we should forget all of what we have learned from 2D interaction techniques since they have been thoroughly studied, documented and most users are already familiar with the 2D interaction.
- However it is just as important to invent new 3D interaction techniques and design new interaction models. All glam and glitter of 3D, shaders, light effects can not overshadow the fact that most people will struggle to understand a badly designed virtual 3D world

**“The relationship between actions and cognitive processes is important because it explains user behaviour and translates to supportive arguments for good design solutions.”**



**“When you apply the 2D-design principles incorrectly, just as with incorrectly applied gestalt principles, user perceptions will be incorrect”.**

- Its beneficial to make use of compelling real world and effective metaphors in an attempt to find the point where users will feel comfortable using the system and navigating in a 3D world. For example a floor, wall, structure to anchor the 3D objects in the scene.





# benefits of 3d UX

3D effects can if used in the right way, enhance the user experience of your design and application

- Z-order depth to allow the user to stay on the same screen, no need to switch view to access sub tasks.
- Light effects to show current state of the system, light up different part of the screen to guide the user to the next interaction point. (bread crumbs)
- Utilise what is beyond the physical screen size and HW.
- Show relationship between sub and main task by utilising spatial awareness. Things that are further away has less importance to the current task, but not unreachable by the user.



# pitfalls of 3d UX

Things to look out for when creating and applying 3D effects to your design and application (bad UX)

- Free floating objects, hard to know what the user can and cannot interact with.
- No relation to real world interaction
- 3D for the sake of just putting 3D on the box = bad user experience.
- Overcrowded and busy scene, adding extra complexity without any user benefit
- No clear direction and obvious navigation, multiple objects in the scene that doesn't actually do anything to enhance the user experience (just fancy graphics)



# conclusion

What's next?

- 3D design is a hot topic
  - Expect more 3D UIs
  - It is a great way of enhancing the UX and in bringing differentiation to a highly saturated market.
- Current designs add more realistic experiences to the 2D model
  - Depth, better use of space, etc
- Future designs may involve more use of 3D space and in-depth navigation in 3D world
  - Need to ensure that don't forget the 2D UX rules – most apply to 3D
  - Expect more research in even more immersive 3D worlds
    - Will they bring value
    - Will they enhance the UX