

Interacção Humana com o Computador

Aula 7



Departamento de Informática
UBI 2024/2025

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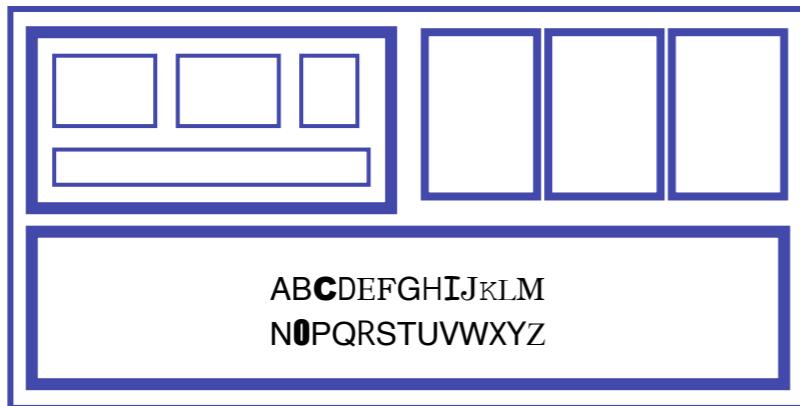


Dix , Alan
Finlay, Janet
Abowd, Gregory
Beale, Russell



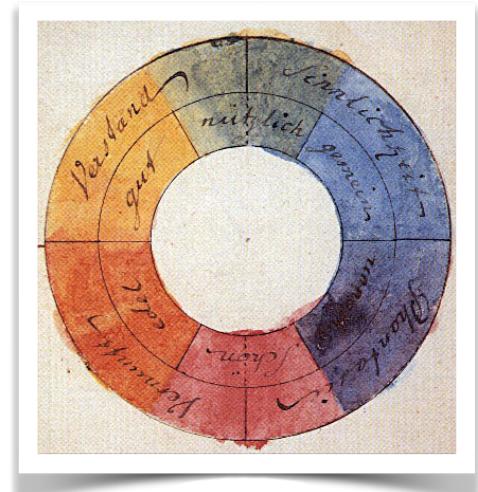
Screen Design

**Basic principles;
Grouping; Structure, Order;
Alignment and Counter; Aesthetics and
Color Theory**



$$a \quad b$$
$$a+b$$

a+b is to *a* as *a* is to *b*





Basic principles

● Ask

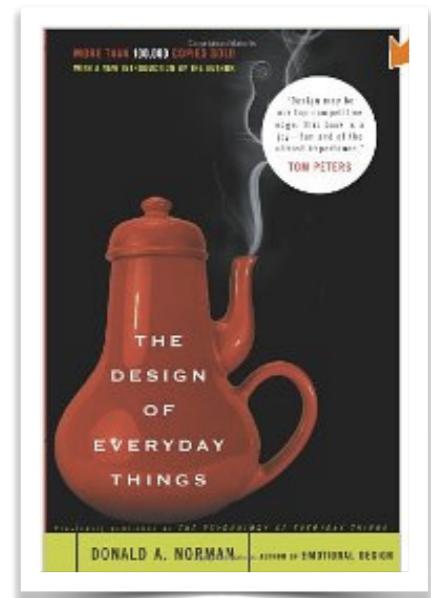
What is the user doing?

● Think

- What information required?
- Comparisons to make?
- Order of things?

● Design

form follows function





Available ingredients for design

- **Grouping of items**
 - remember: “memory chunking”
- **Order of items**
- **Decoration - fonts, boxes etc.**
- **Alignment of items**
- **White space between items**





Order of groups and items

- Think well about what is the user's natural order, in his mental model.
- It should match screen order!
 - Use boxes, space, etc;
 - Set up tabbing right

Área do Triângulo

Formula de Heron

$s = (36 + 48 + 60) / 2$
 $= 144 / 2$
 $= 72 \text{ cm}$

$A = \sqrt{72 \times (72-36) \times (72-48) \times (72-60)}$
 $= \sqrt{72 \times 36 \times 24 \times 12}$
 $= \sqrt{746.496}$
 $= 864 \text{ cm}^2$

a = ? valor positivo
b = ? valor positivo
c = ? valor positivo

Calcular

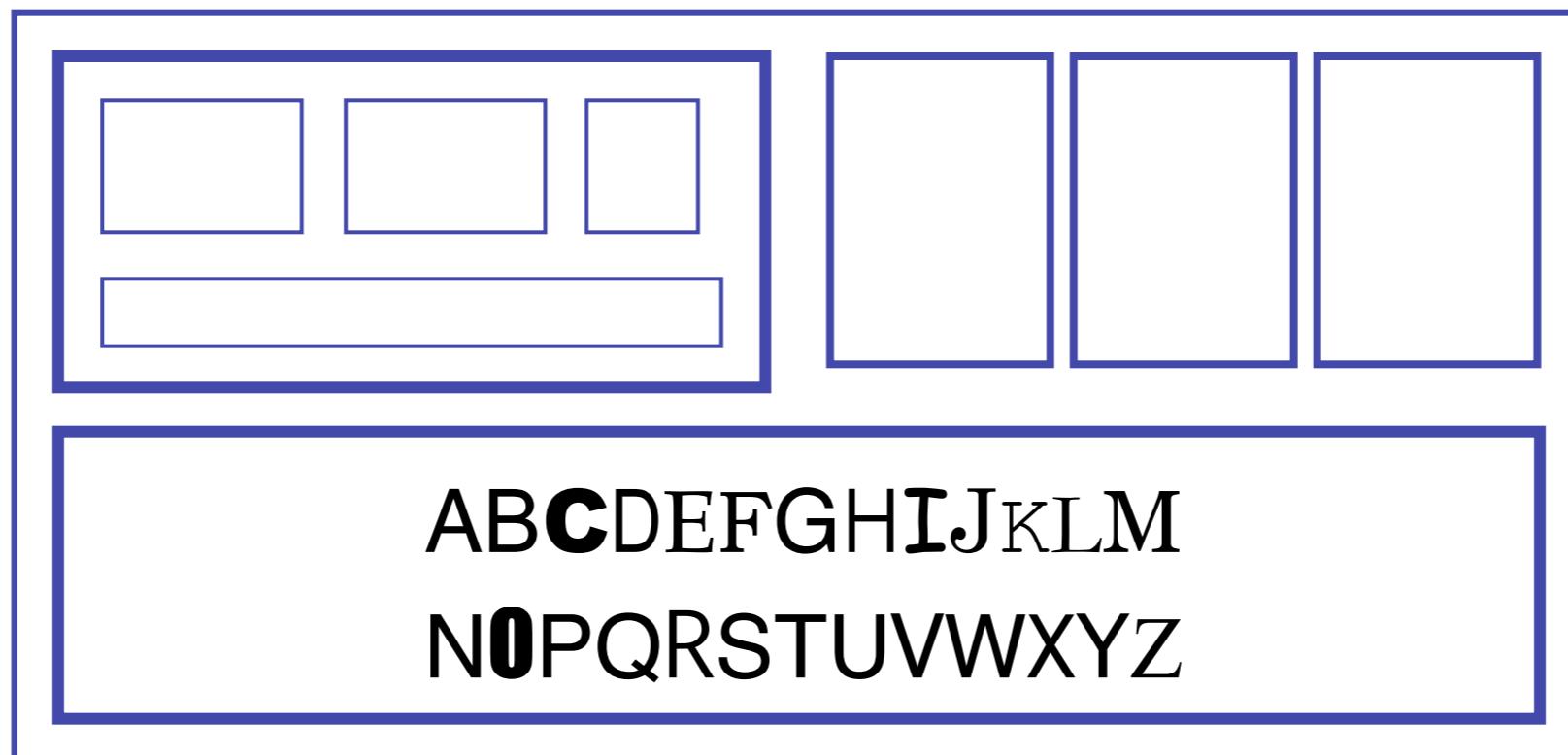
Area: 0.00000





Decoration

- Use boxes to group logical items
- Use fonts for emphasis, headings
- But not too many!!





Grouping and structure

logically together ⇒ physically together

The screenshot shows the GnuCash application interface for editing an invoice. The main window title is "Controle GADENGE.gnucash - Editar Fatura - 000001 - GnuCash". The menu bar includes Arquivo, Editar, Ver, Ações, Empresa, Relatórios, Ferramentas, Janelas, and Ajuda. The toolbar contains icons for Gravar (Save), Imprimir Fatura (Print Invoice), Fechar (Close), Nova Fatura (New Invoice), Editar Fatura (Edit Invoice), Duplicate Invoice (Duplicate Invoice), Registrar (Register), Cancelar (Cancel), Excluir (Delete), Duplicar (Duplicate), Up, and Down.

The current tab is "Contas" (Accounts). The invoice number is "Editar Fatura - 000001".

Informação da Fatura:

- Número da Fatura: 000001
- Data de Abertura: 06/01/2012
- Ativo

Informações da Cobrança:

- Cliente: Cliente 1 (Edit...)
- Projeto: Serviço 1 (Edit...)
- ID da Cobrança:
- Formas de Pagamento: Nenhum

Comentários:

Notas pessoais são digitadas aqui. Estes dados não aparecem em faturas impressas.

Registros de Fatura:

Data	Fz	Descrição	Ação	Conta de Receita	Quantida	Preço Unitário	Tipo	Cor	Desconto	Tri	Ir	Tab	Subtotal	Impostos
06/01/2012	X	Pregos	Material	Receitas:Vendas	1.000,00	0,02	%	<		X			20,00	0,00
06/01/2012	X	Martelo	Material	Receitas:Vendas	1,00	35,00	%	<		X			35,00	0,00
06/01/2012		Descrição	Ação	Conta de Receita	Identidade	Unitário	%	<	Desconto	X		istos	0,00	0,00

Total: R\$ 55,00 Subtotal: R\$ 55,00 Impostos: R\$ 0,00

sexta-feira 06 janeiro 2012

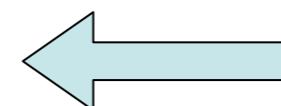




Text Alignment

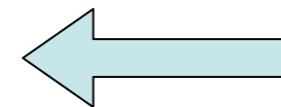
- **Reading from left to right, but ...**
- **In western culture:** left hand side text alignment

Willy Wonka and the Chocolate Factory
Winston Churchill - A Biography
Wizard of Oz
Xena - Warrior Princess



Readable

Willy Wonka and the Chocolate Factory
Winston Churchill - A Biography
Wizard of Oz
Xena - Warrior Princess



Hard to scan





Alignment / Names

- **What is easy/convenient/ergonomic for the user? Example:**

Alan Dix
Janet Finlay
Gregory Abowd
Russell Beale



Abowd,
Beale,
Dix,
Finlay,
Gregory
Russell
Alan
Janet



Alan Dix
Gregory Abowd
Janet Finlay
Russell Beale





Alignment / Numbers

Think about convenience:

What is the purpose?

Which one is bigger?

9.497895
532.56
179.3
256.317
15
73.948
1035
3.142
497.6256
3546





Alignment / Numbers

Visually: long numbers are big numbers! **False!**

For the sake of truth: align decimal points or right align integers

9.497895	
532.56	
179.3	
256.317	
15	
73.948	
1035	
3.142	
497.6256	
3546	





Alignment / Numbers

Visually: long numbers are big numbers! **False!**

For the sake of truth: align decimal points or right align integers

For the sake of beauty: reduce to the same decimal places

9.497895
532.560000
179.300000
256.317000
15.000000
73.948000
1035.000000
3.142000
497.625600
3546.000000





Alignment / Numbers

Visually: long numbers are big numbers! **False!**

For the sake of truth: align decimal points or right align integers

For the sake of beauty: reduce to the same decimal places. **If safe, sacrifice precision.**

9.498
532.560
179.300
256.317
15.000
73.948
1035.000
3.142
497.626
3546.000





Multiple Columns

- **Scanning across gaps hard:
(often hard to avoid with large data base fields)**

sherbert	75
toffee	120
chocolate	35
fruit gums	27
coconut dreams	85





Multiple Columns

- **Use leaders:** replaces the conventional ruler

sherbert	75
toffee	120
chocolate	35
fruit gums.....	27
coconut dreams.....	85





Multiple Columns

- Use different tones/shades

sherbert	75
toffee	120
chocolate	35
fruit gums	27
coconut dreams	85





The meaning of space

An old typographic technic

WHAT YOU SEE

b d i e (GAPS) ■ B E T W E E N ■

The “Counter”





Familiar home appliances

- **Grouping of elements**
- **Ordering of elements**
- **Different decorations**
- **Alignments**
- **Spacing**





Space to separate

Uniform Spacing





Space to separate

Uniform Spacing





Space to separate

Hierarchical Spacing





Space to separate

Hierarchical Spacing





Space to separate

Hierarchical Spacing

*Controle GADENGE.gnucash - Editar Fatura - 000001 - GnuCash

Arquivo Editar Ver Ações Empresa Relatórios Ferramentas Janelas Ajuda

Gravar Imprimir Fatura Fechar Nova Fatura Editar Fatura Duplicate Invoice Registrar Cancelar Excluir Duplicar Up Down

Contas Editar Fatura - 000001

Informação da Fatura

Número da Fatura 000001
Data de Abertura 06/01/2012
 Ativo

Informações da Cobrança

Cliente Cliente 1 Editar...
Projeto Serviço 1 Editar...
ID da Cobrança

Comentários

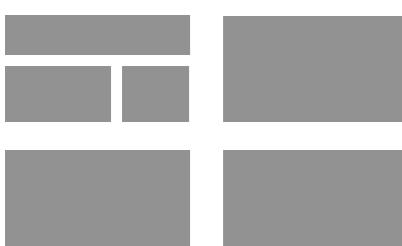
Notas pessoais são digitadas aqui. Estes dados não aparecem em faturas impressas.

Formas de Pagamento Nenhum

Registros de Fatura

Data	Fz	Descrição	Ação	Conta de Receita	Quantida	Preço Unitário	Tipo	Cor	Desconto	Tri	I	Tab	Subtotal	Impostos
06/01/2012	X	Pregos	Material	Receitas:Vendas	1.000,00	0,02	%	<		X			20,00	0,00
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06/01/2012		Descrição	Ação	Conta de Receita	Quantidade	Unitário	%	<	Desconto	X	Istos		0,00	0,00

Total: R\$ 55,00 Subtotal: R\$ 55,00 Impostos: R\$ 0,00
sexta-feira 06 Janeiro 2012





Space to separate

Highlight with spacing





Space to separate

"All the News That's Fit to Print."

The New York Times.

VOL. LXI. NO. 1886.
NEW YORK, TUESDAY, APRIL 16, 1912.—TWENTY-FOUR PAGES.
ONE CENT In Greater New York, One Cent
Jersey City, and Newark. Two Cents

TITANIC SINKS FOUR HOURS AFTER HITTING ICEBERG; 866 RESCUED BY CARPATHIA, PROBABLY 1250 PERISH; ISMAY SAFE, MRS. ASTOR MAYBE, NOTED NAMES MISSING

Col. Astor and Bride,
Isidor Straus and Wife,
and Maj. Butt Aboard.

"RULE OF SEA" FOLLOWED

Women and Children Put Over
in Lifeboats and Are Supposed
to be Safe on Carpathia.

PICKED UP AFTER 8 HOURS

Vincent Astor Calls at White Star
Office for News of His Father
and Leaves Weeping.

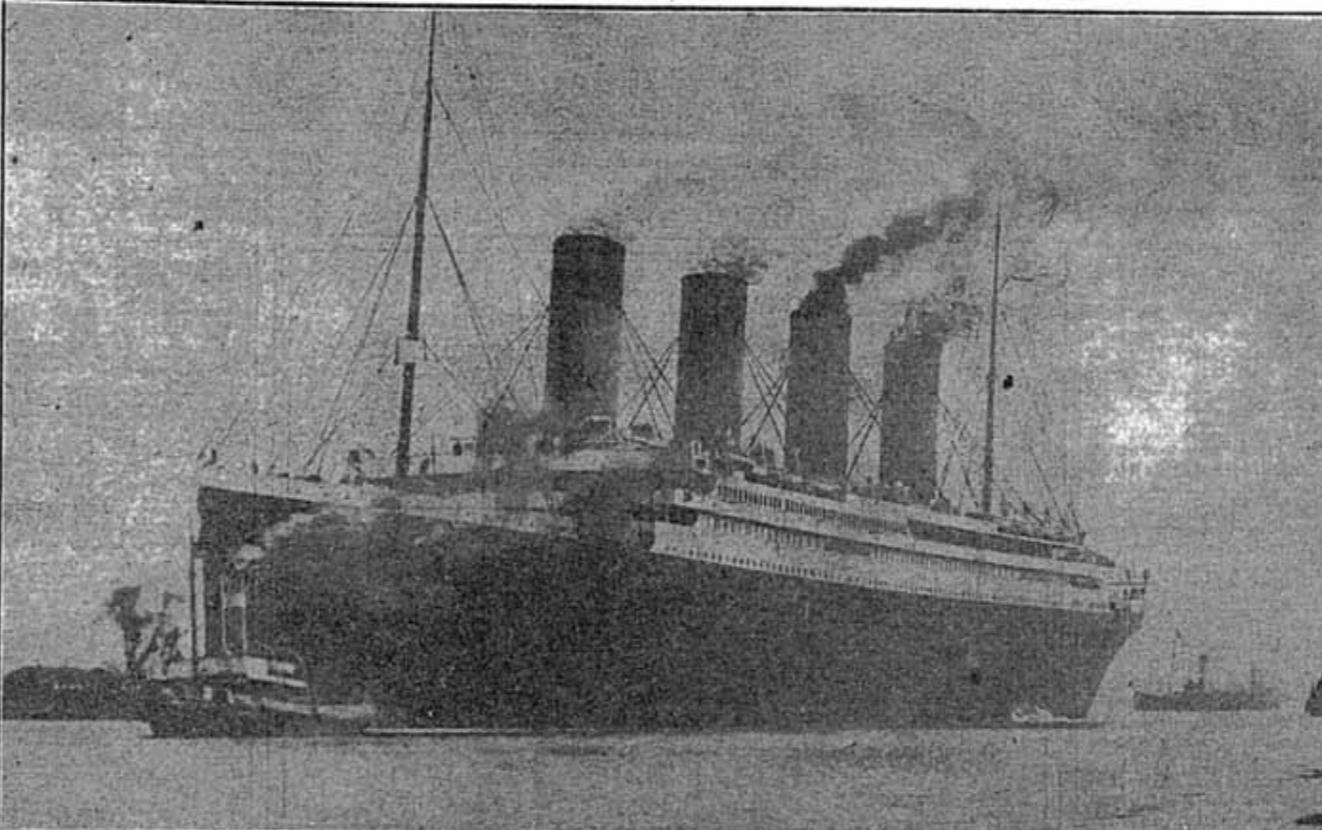
FRANKLIN HOPEFUL ALL DAY

Manager of the Line Insisted
Titanic Was Unsinkable Even
After She Had Gone Down.

HEAD OF THE LINE ABOARD

J. Bruce Ismay Making First Trip on
Gigantic Ship That Was to
Surpass All Others.

The admission that the Titanic, the
biggest steamship in the world, had
been sunk by an iceberg and had gone
to the bottom of the Atlantic, probably
carrying more than 1,400 of her pas-



Biggest Liner Plunges
to the Bottom
at 2:20 A. M.

RESCUERS THERE TOO LATE

Except to Pick Up the Few Hundreds Who Took to the
Lifeboats.

WOMEN AND CHILDREN FIRST

Cunarder Carpathia Rushing to
New York with the
Survivors.

SEA SEARCH FOR OTHERS

The California Stands By on
Chance of Picking Up Other
Boats or Rafts.

OLYMPIC SENDS THE NEWS

Only Ship to Flash Wireless Mes-
sages to Share After the
Disaster.

LATER REPORT SAVES 866.

BOSTON, April 15.—A wireless
message picked up late to-night,
relayed from the Olympic, says





Space to separate

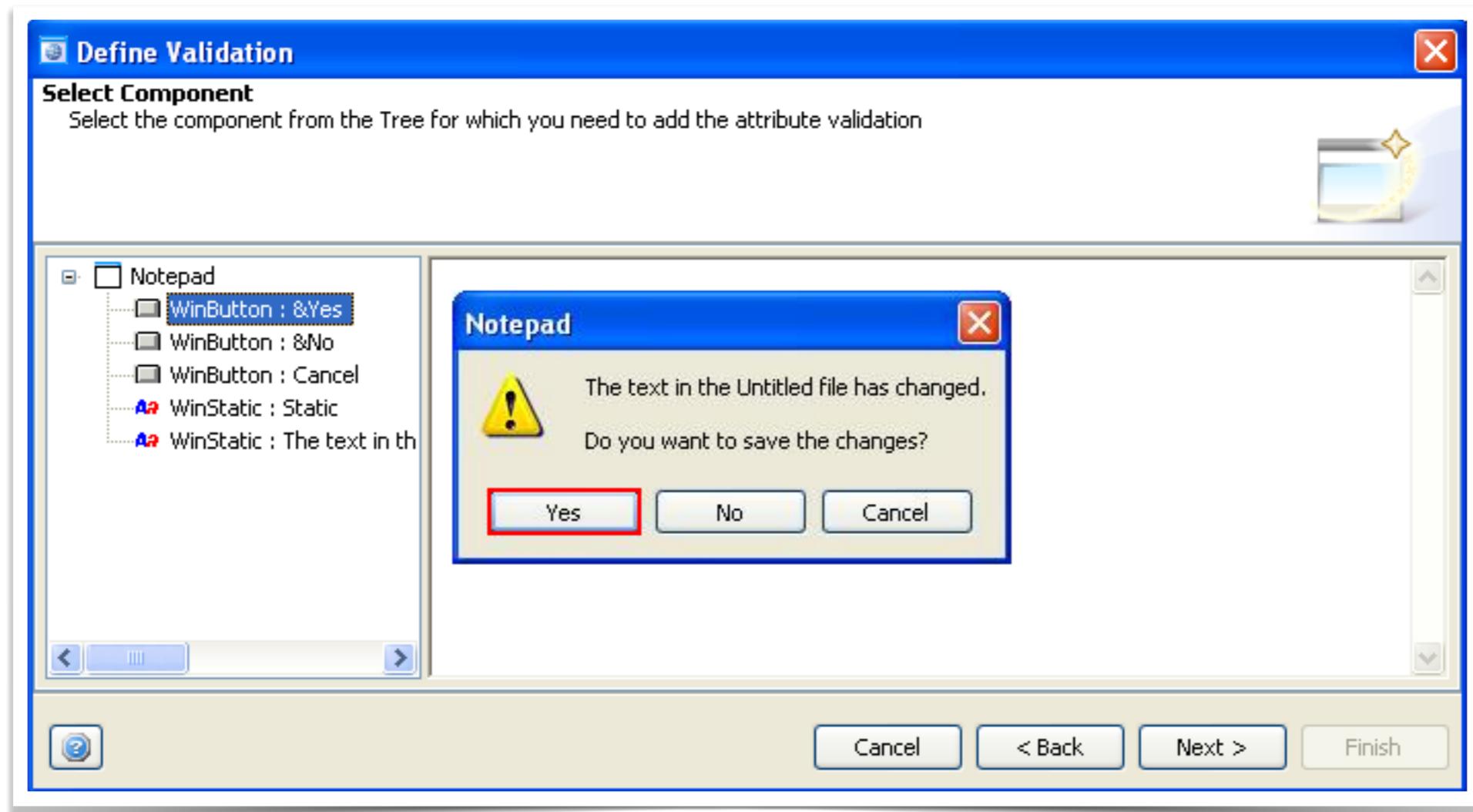


HUMAN-COMPUTER
INTERACTION

THIRD EDITION



Space to separate





The aesthetic impact of a GUI

Electronic Mail Options

File Attachment Method

- Binary Method
- Insert Text in Message
- Append Text to Message

Out Mail

- Keep Copies
- Delete
- Transfer to Out Mail Directory

Parameters

- Send at Start of Test
- Skip Large Messages
- Keep Password
- Leave Mail on Server

Check Mail Every: Min.

Maximum Size: Bytes

Operation Information

Internet Account Name:

Mail Server Name:

Real Name of:

Work Offline Ignore Other Applications

Electronic Mail Options

Attach File in the Binary Method

Insert File in the Text of the Message

Append File at the End of the Text

Keep Copies of Out Mail

Delete Out Mail

Transfer to Out Mail Directory

Send at Start of Test

Skip Large Messages

Keep Password

Leave Mail on Server

Electronic Mail Reception:

Check Mail Every: Min.

Maximum Size: Bytes

Ignore Other Applications

Internet Account Name:

Mail Server Name:

Real Name of:

Network Connection Method:

Work Offline





The aesthetic impact of a GUI

The importance of a good alignment

The image displays two versions of a Windows-style dialog box titled "Entrega e Pagamento". Both versions contain the same fields: Nome, Morada Factura, Cód. Post, Cidade, Morada Entrega, and Cód. Post. The left version exhibits poor alignment, with labels and input fields not consistently aligned horizontally. The right version shows a significant improvement in alignment, where all labels and input fields are properly aligned, creating a more aesthetically pleasing and user-friendly interface.





The aesthetic impact of a GUI

The aesthetic and functional importance of spacing

Entrega e Pagamento

Nome:

Morada Factura:

Cód. Post: Cidade:

Morada Entrega:

Cód. Post: Cidade:

Entrega e Pagamento

Nome:

Morada Factura:

Cód. Post: Cidade:

Morada Entrega:

Cód. Post: Cidade:





Knowing what to do

- **What is active what is passive**
 - where do you click
 - where do you type
- **Consistent style helps**
 - e.g. web underlined links
- **Labels and icons**
 - standards for common actions
 - language – bold = current state or action





Affordances (facilitadores)

- **Psychological term for physical objects**

- shape and size suggest actions
 - pick up, twist, throw
- also cultural – buttons '**afford**' pushing

'affords'
grasping

- **For screen objects**

- button-like object 'affords' mouse click
- physical-like objects suggest use

- **Culture of computer use**

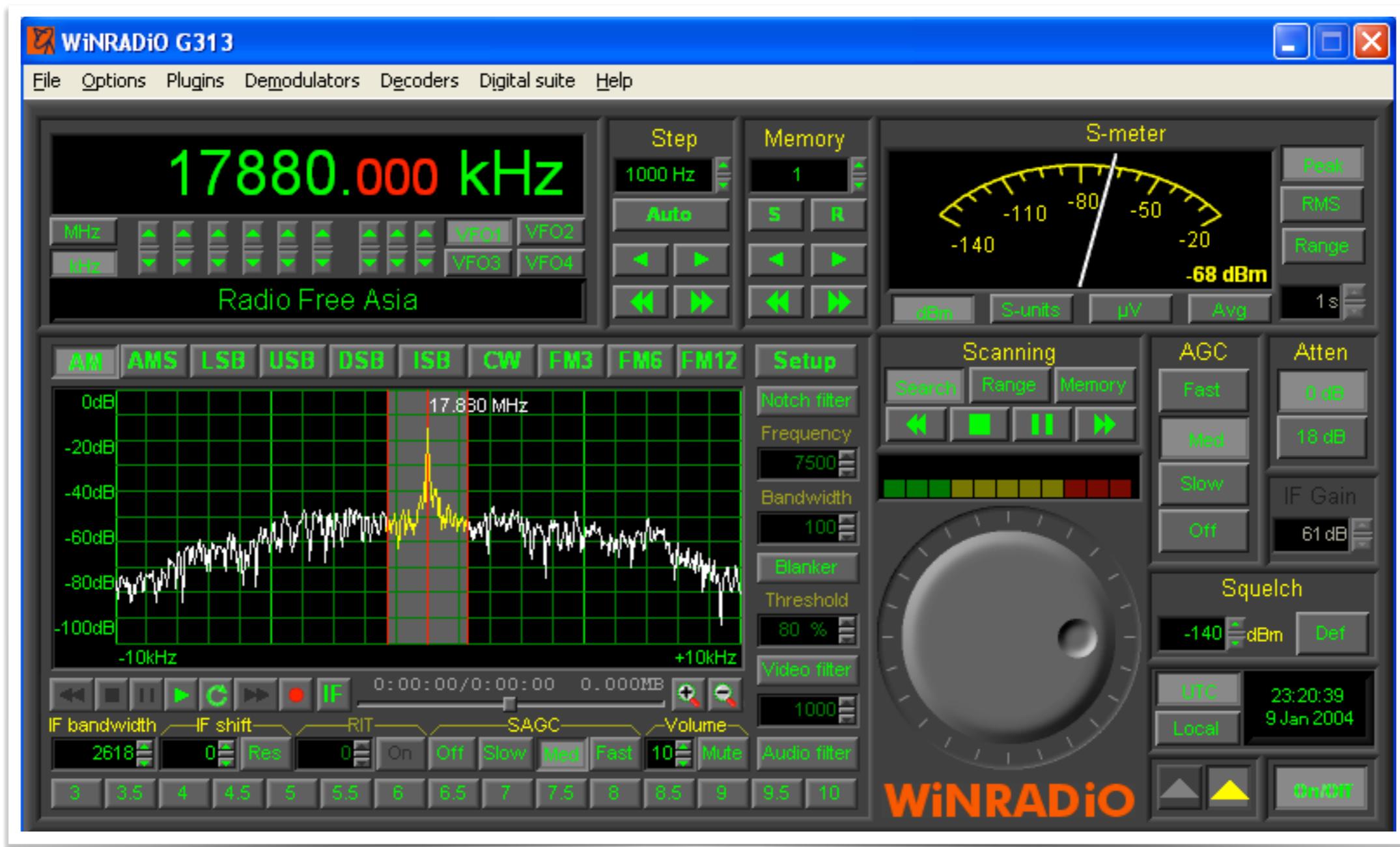
- icons 'afford' clicking
- or even double clicking ... **not like real buttons!**





Affordances

A good implementation of natural affordances provides an **intuitive** interface.





Web Design

- Web Design share some principles, guidelines and standards, with other more general applications.
- There are, however, **specific features** in Web Design that are different from applications in general, both at the **aesthetic** and **functional** level (interaction):
- Navigation is part of an **integral experience**:
 - The user controls the navigation
 - Diversity of devices and contexts



Web Design: The 10 mistakes

1. Bad search
2. PDF files for online reading (disruptive leap)
3. Not changing the color of visited links
4. Non-scannable Text
5. Fixed font size
6. Page titles with low search engine visibility
7. Anything that looks like an advertisement
8. Violating design conventions (e.g. search bar location)
9. Opening new browser windows
10. Not answering users' questions (e.g. lacking prices).

[\[source\]](#)

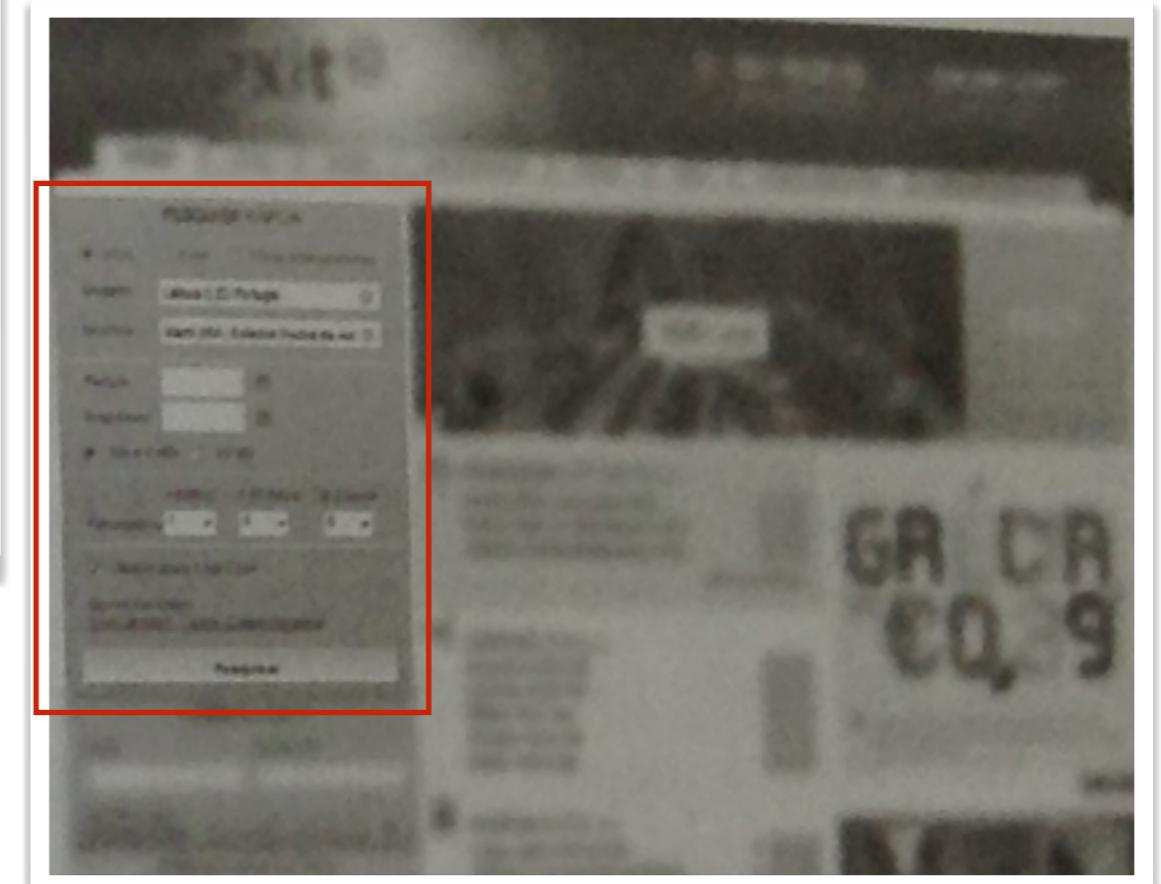
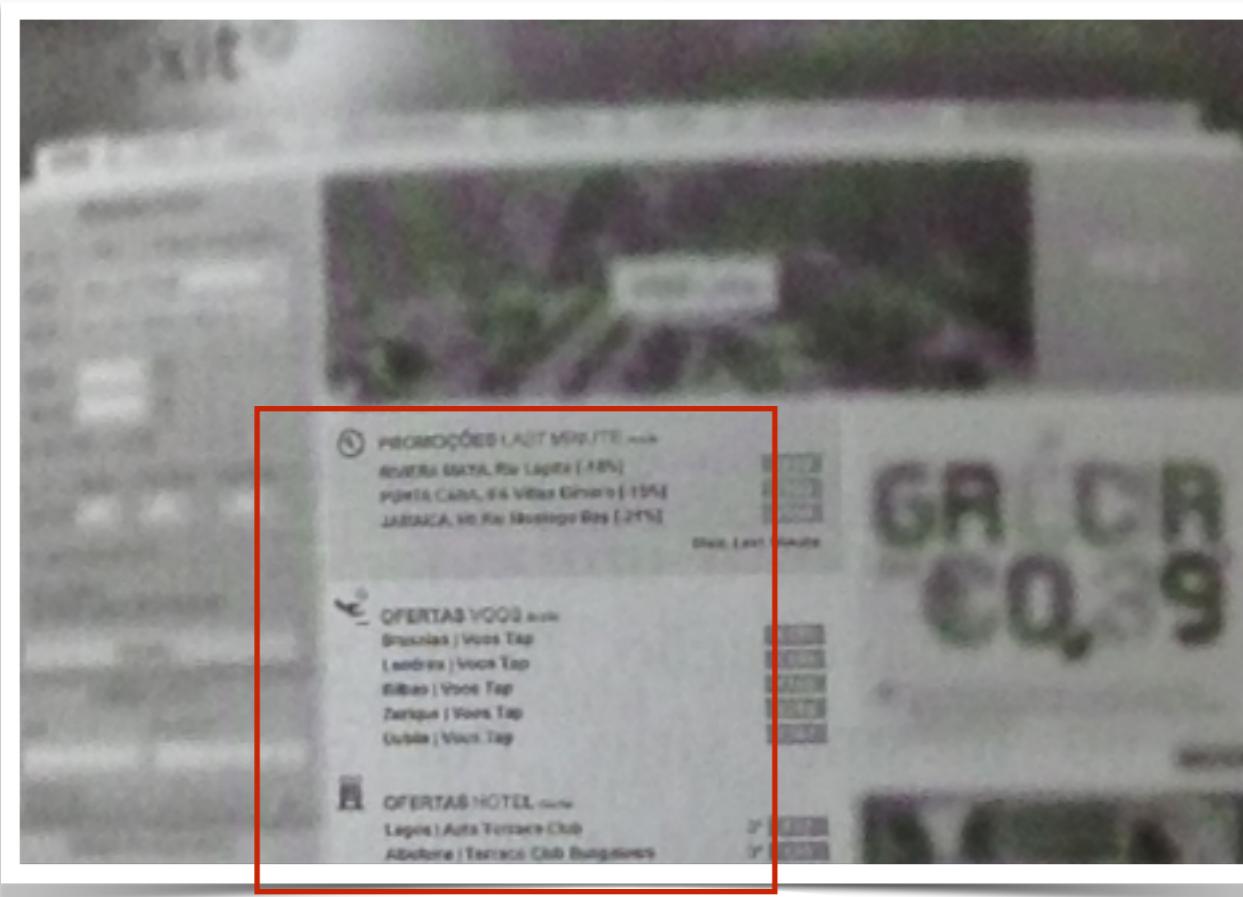
Jakob Nielsen





Layout Design

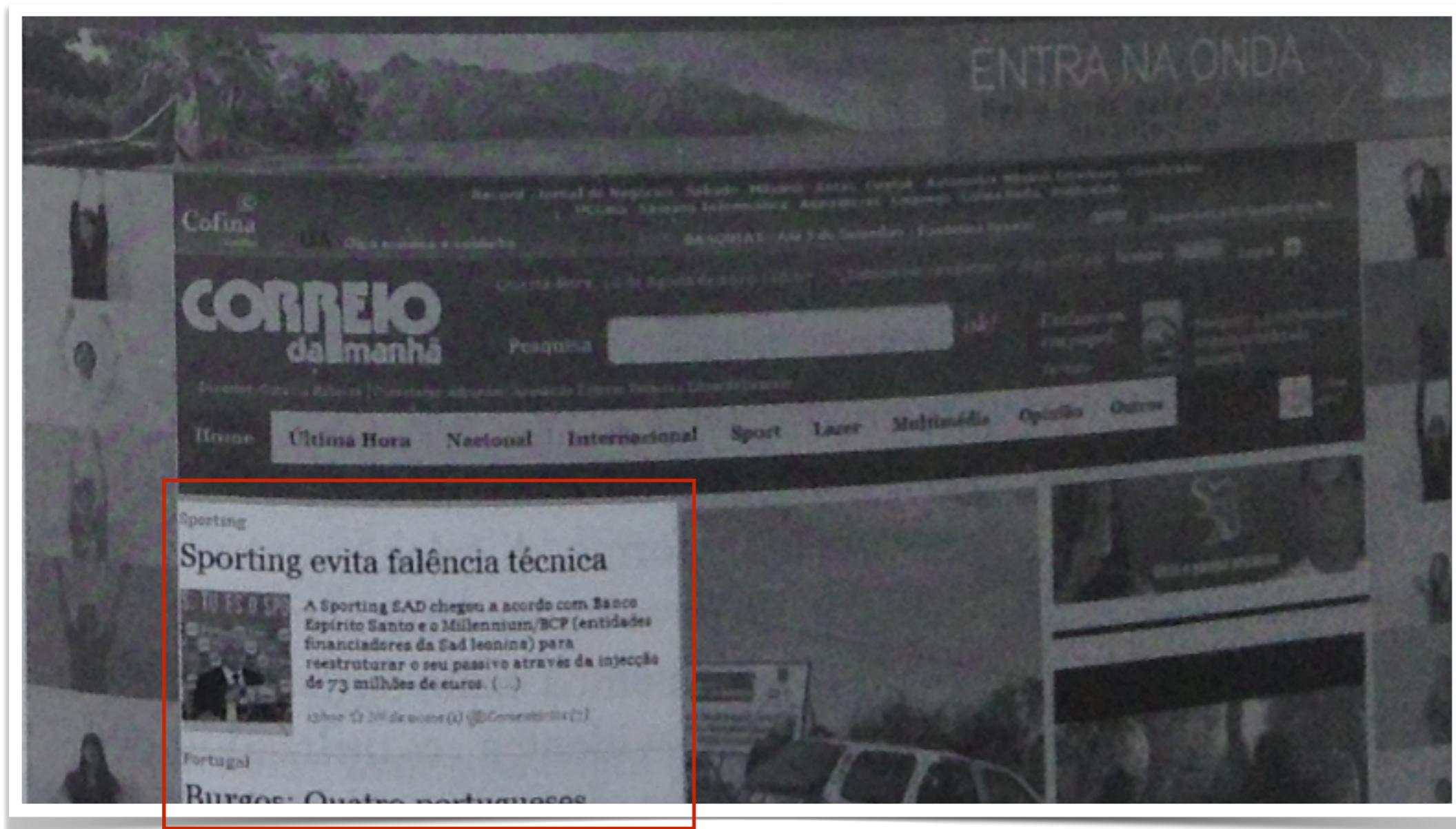
- Requires notions of **graphic design** and color theory. It also requires **knowing the users** in order to efficiently dispose the elements.
Remember that: **Human attention is selective**





Signal versus Noise

- Omit unnecessary / superfluous items of information!



Only 20% of the space used !



Minimalist Design



- It is visually **appealing** to users
- There must be **consistency** throughout the site
- However, a web page is not a static medium, it is **not** intended for **passive** (magazine) **consumption**.
- Expect **interaction** ==> balance between aesthetics, functionality / usability.
- Layout can be very **different** on the client device.
- There must be a commitment, to get **functional**, **adaptable** and standards-compliant sites.



Highlight and Hierarchy

- Ensure the presence of **highlighted** elements ==> implicitly and visually define a structure.

↓ POLÍTICA



CDS-PP espera apoio do PSD para adiamento do Código Contributivo

O líder parlamentar do CDS-PP afirmou esta quarta-feira esperar que o PSD "não fique ao lado" do Governo contra o diploma que (...)

15h26 Comentários (0)

↓ ENSINO



Lista de todas as escolas que vão fechar, concelho a concelho

Veja a lista das escolas que vão fechar em cada concelho de Portugal. (...)

17 Agosto 2010 Comentários (9)

↓ SAÚDE



Doentes cegos vão avançar para a Justiça

Os familiares e amigos dos quatro doentes que cegaram na sequência de cirurgias aos olhos na clínica I-QMed, em Lagoa, Algarve, (...)

0h30 Comentários (1)

Educação contesta Finanças

O Ministério da Educação, em nota enviada ao CM, contestou a auditoria da Inspecção-Geral de Finanças, que segundo noticiou ontem (...)

17 Agosto 2010 Comentários (2)

Hospitais demoram 349 dias para pagar

O crescimento da dívida dos hospitais à indústria farmacêutica é "um bocadinho descontrolada", admitiu ontem a Associação dos (...)

17 Agosto 2010 Comentários (0)



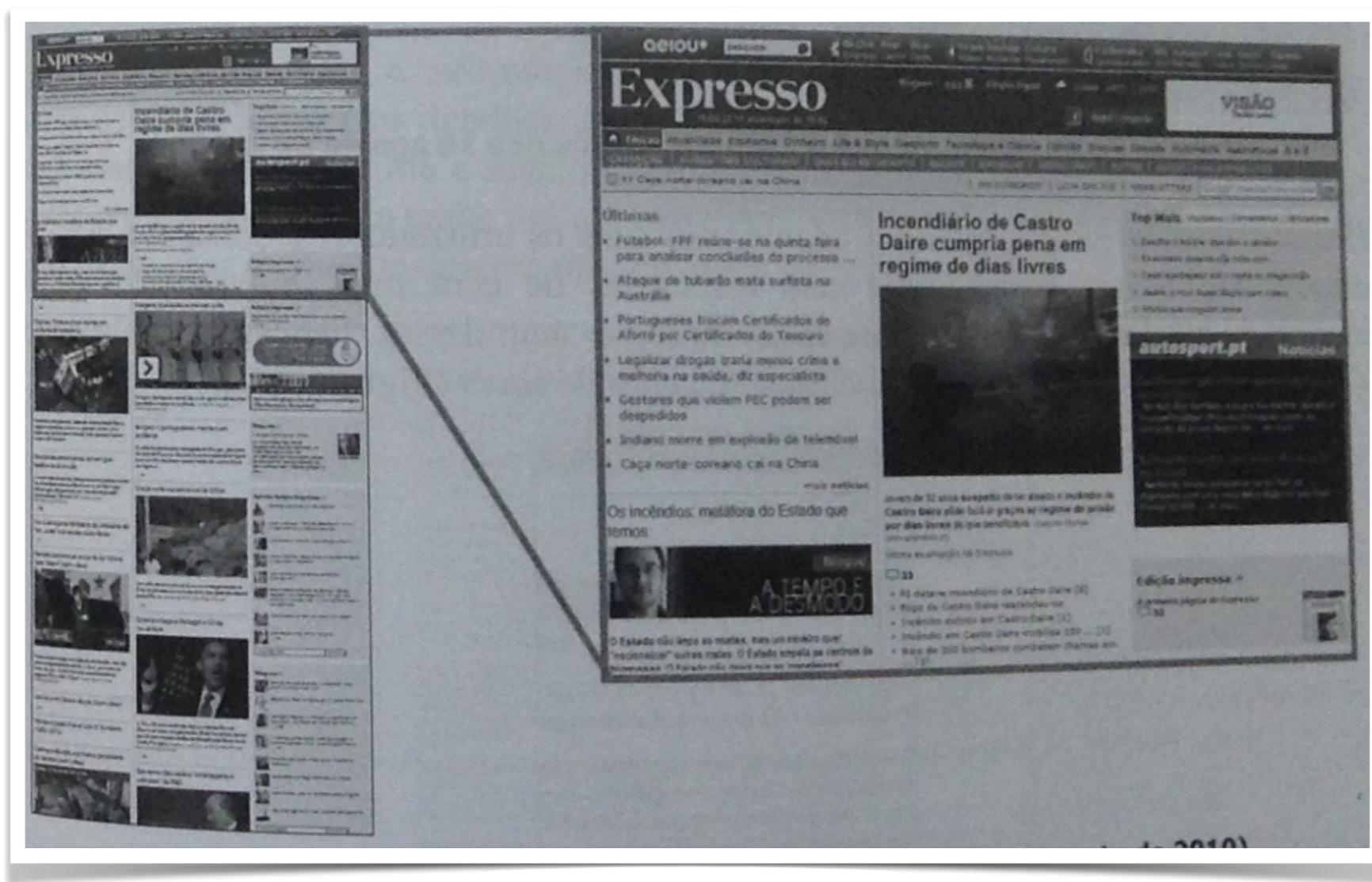
Highlight and Hierarchy

- A clear visual hierarchy: which elements are subordinate to others.
- Three ways to make the relationships clear are:
 - **Degree:** more important => more highlighted with different fonts, weight, color.
 - **Proximity:** related elements are together
 - **Framing** (enquadramento): Subordinated elements should appear nested/indented.
 - **Above the fold** (acima da dobra): choose well what is shown in this area. It is a concept brought from the press, taking into account the folding of a newspaper



Highlight and Hierarchy

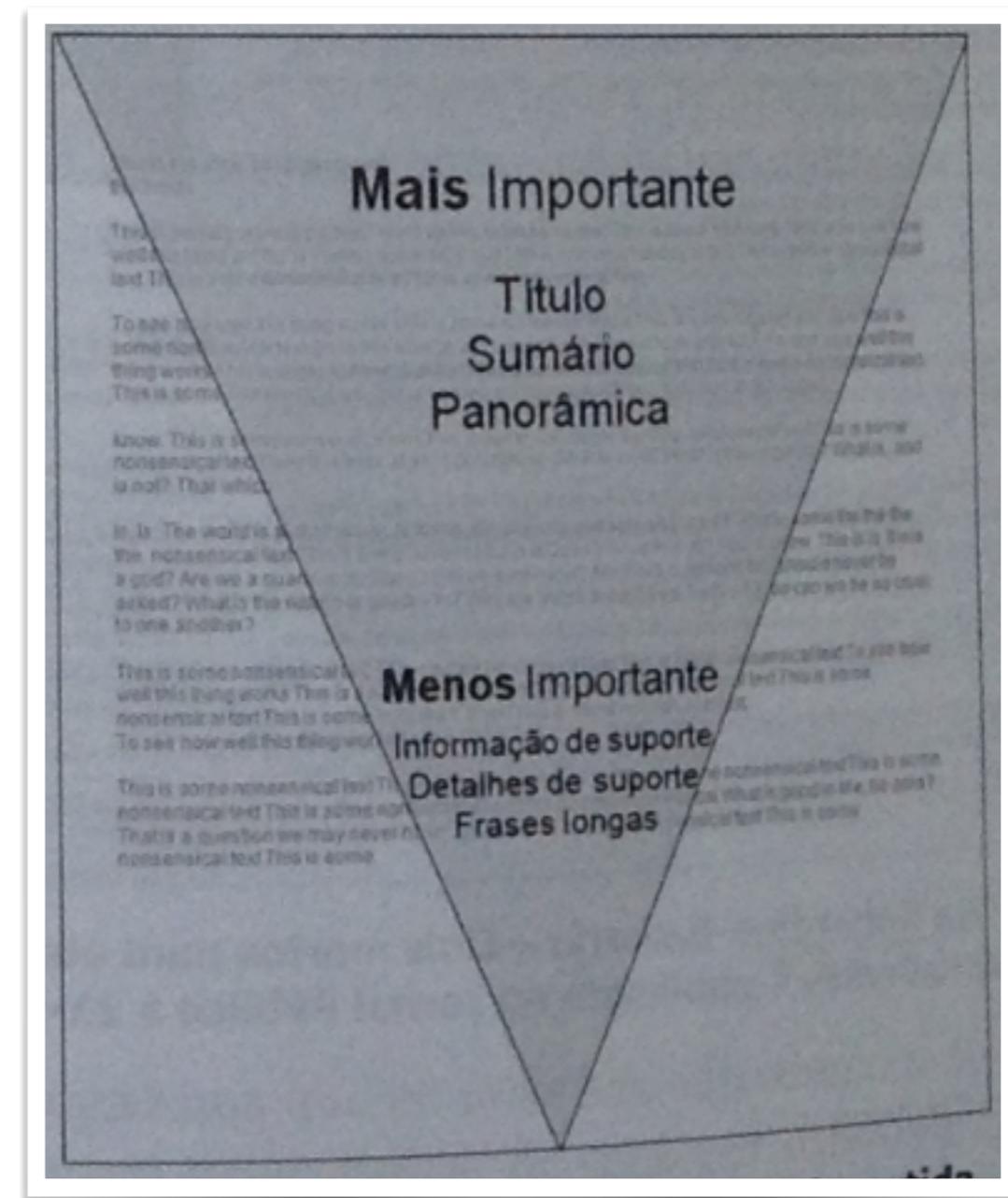
- **Above the fold** (acima da dobra): choose well what is shown in this area. It is a concept imported brought from the *press*, taking into account the folding of a newspaper





Content

- The quality of a page is not only in layout but also its content. This determines whether the user will return to the site repeatedly.
- How to present the content?
- The **inverted pyramid** of information:
 - Used in the press
 - Principle of progressive complexity: Concise title; Concise text; details support and enlarge the story





Concise text <= self-evident

Instead of:

Ajude-nos a melhorar o nosso serviço, preenchendo o questionário apresentado em seguida. Não é estritamente necessário preencher todos os campos, apenas os preenchidos com (*). Se quiser deixar comentários adicionais, existe uma caixa de texto no final do questionário que pode preencher. (**40 word**)

Use:

Por favor ajude-nos preenchendo este questionário. Os campos obrigatórios estão assinalados com um (*). (**13 words**)



Concise text <= self-evident

Instead of:

Welcome to our website! We are Consulta, a consulting company in the field of computer science that will do everything at your disposal to help you. **(13 words)**

Use:

Nothing. **(0 words)**



Great Links

- A good link is one that allows you to **foresee** the destination.
- They must be visually **distinct** from the rest of the content.
- They should be **short**:
instead of: "... which flights depart from our airport in the next few hours ..." **use:** "... which are the next flights ..."
- They must express a **recognisable target**. Avoid links like "here" and "list".
instead of: "Pode agora ficar a conhecer as novidades da nossa loja aqui ..." **use:** "Pode agora ficar a conhecer as novidades da nossa loja."

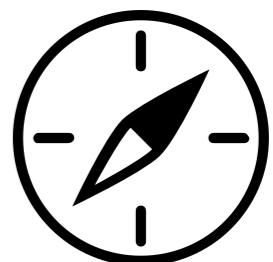
instead of: "... e saiba mais sobre o Festival dos Oceanos ..." **use:** "... e conheça a localização do Festival dos Oceanos."



Location and Orientation

Home > Products > Digital Cameras > Lenses

- Provide a sense of location, for example through **breadcrumbs** (caminhos de migalhas).
- They must obey the following principles:
 - Placed at the top of the page (almost a standard)
 - Small fonts
 - Highlight the last item
 - Do not work well alone
- Always provide a "homecoming" option





Standard Components

- A ***Homepage***. It should focus on a main topic, build a brand image, facilitate navigation and attract visitors to return.
- The ***Sign In/Up***, on a website. You should collect the minimum information necessary, have a clear privacy policy, a password recovery method, allowing user to explore before registration.
- The ***Shopping Cart***. Accessible everywhere, easy to add, do not allow unavailable products, detailed information of each item. Full cost information, a visible checkout link and a link to continue shopping. Allow "save for later ...".
- The ***Search Tool***. Consistent location, avoid blocked searches, provide default categories, flexibility of results and sorted by relevance. Customisation.



Aesthetics & HCI



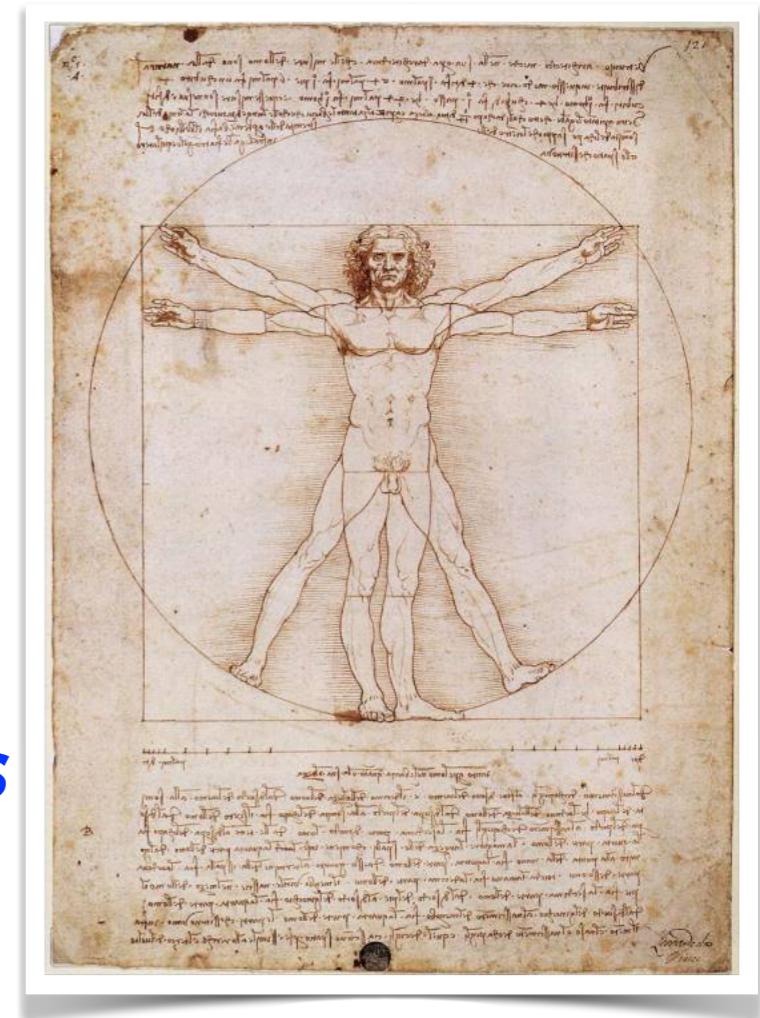
"Beauty is in the eye of the beholder"

William Shakespeare



Aesthetic Patterns

- Are there universal aesthetic patterns, or even standards?
- Is there an objective concept of beauty?
- The Greeks looked for and found something! (*aisthésis*)
- The Renaissance established *Aesthetics* as an independent discipline, from *Metaphysics, Logic, and Ethics*.
- Is it important for HCI?



O Homem Vitruviano,
por Leonardo da Vinci,
em 1487



Aesthetic Patterns

Are there universal aesthetic patterns?
Is there an objective concept of beauty?



Starry Night, Vincent van Gogh

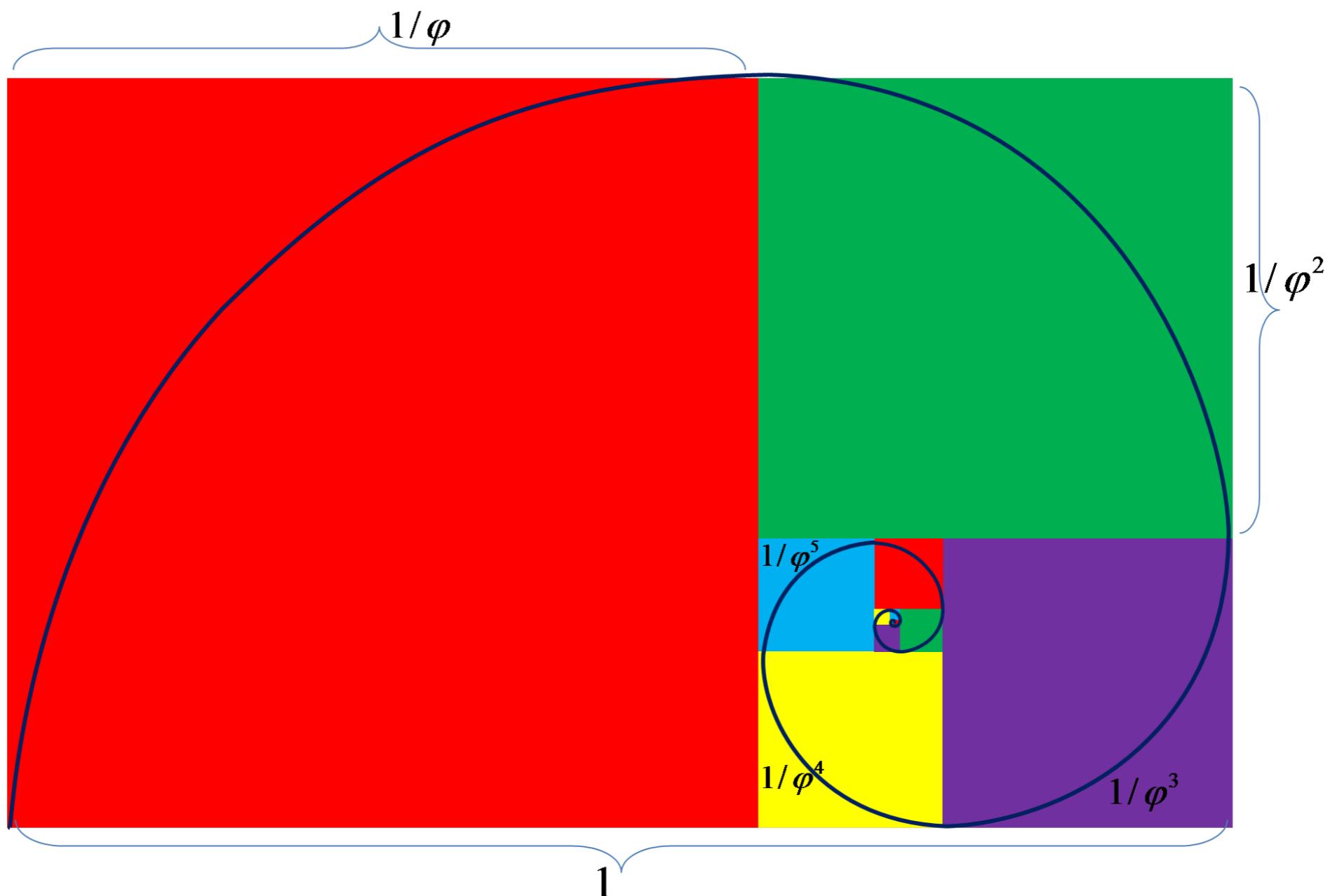


Venus de Milo
Louvre, Paris



Aesthetic, size and proportion

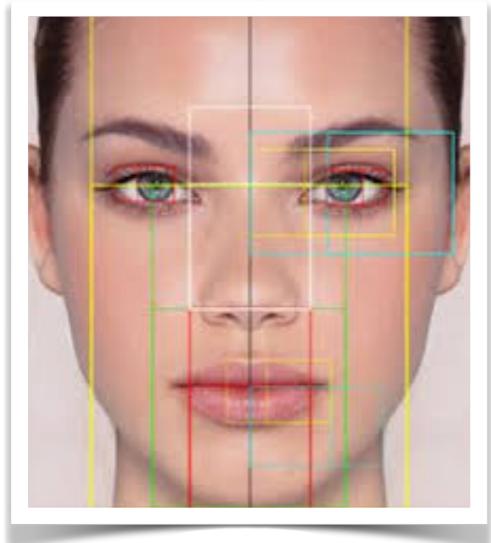
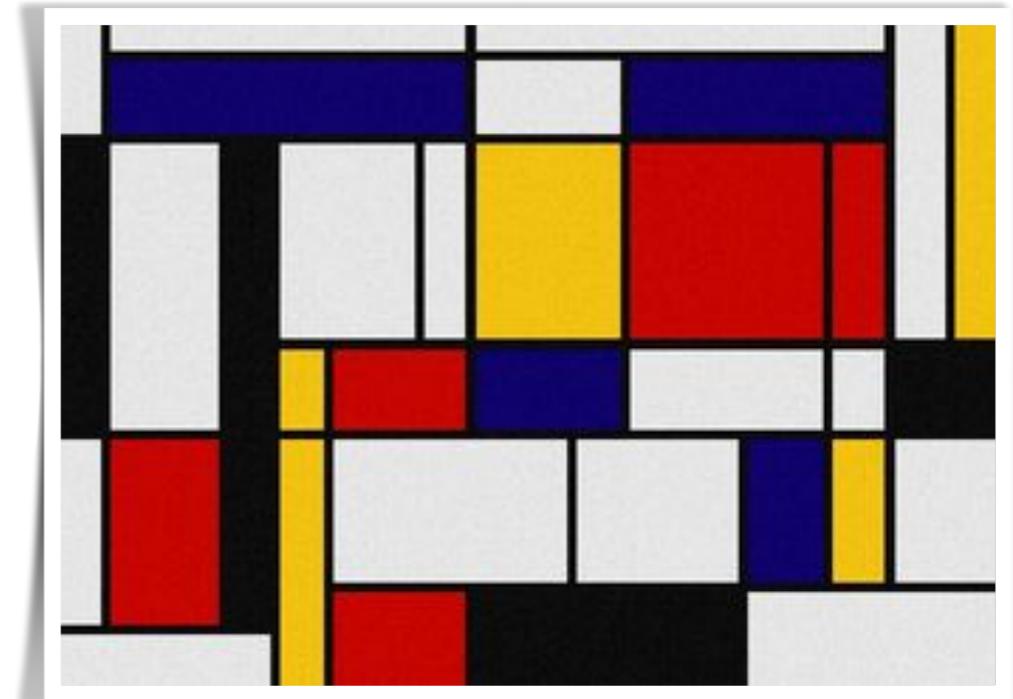
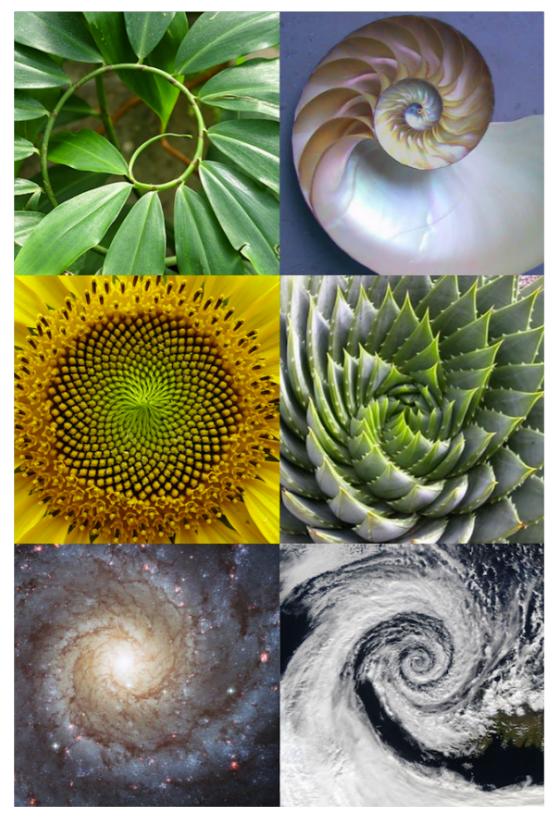
What can we say in terms of size and proportion among objects? Beautiful patterns?





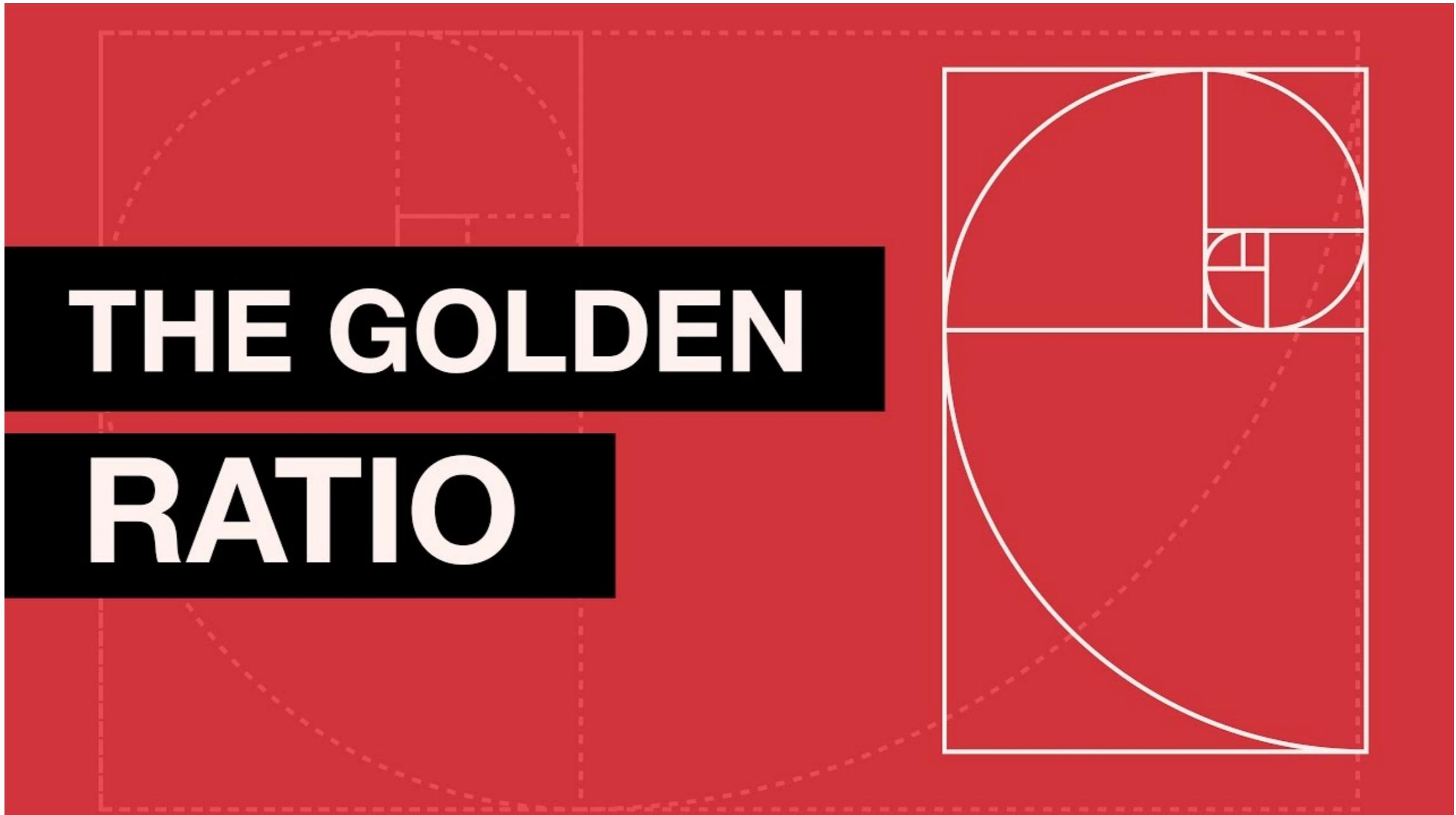
Aesthetic, size and proportion

What can we say in terms of size and proportion among objects? Beautiful patterns?





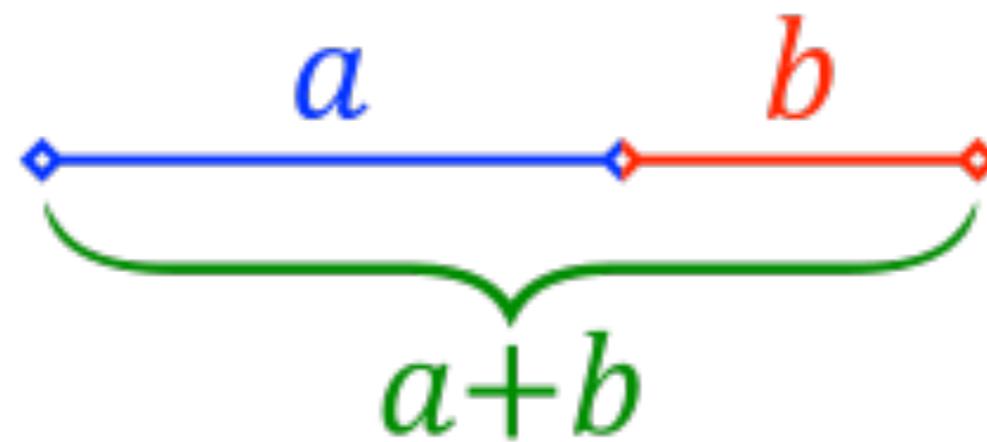
Aesthetic, size and proportion





The "Golden Ratio"

Concept and definition:



$a+b$ is to a as a is to b

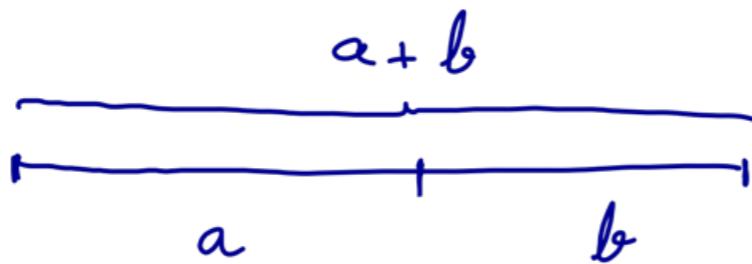
Number Φ

$$\Phi = \frac{1 + \sqrt{5}}{2} \approx 1.6180339887\dots$$



The "Golden Ratio"

Golden Ratio



$$\frac{a}{b} = \frac{a+b}{a} \Leftrightarrow a^2 = ab + b^2 \Leftrightarrow$$

$$\Leftrightarrow a^2 - ba - b^2 = 0 \Leftrightarrow a = \frac{b \pm \sqrt{b^2 + 4b^2}}{2} \Leftrightarrow$$

$$\Leftrightarrow a = \frac{b \pm \sqrt{5b^2}}{2} \Leftrightarrow a = \frac{1 \pm \sqrt{5}}{2} b \Rightarrow$$

$$\Rightarrow \frac{a}{b} = \frac{1}{2} + \frac{\sqrt{5}}{2} \approx 1.61... (\varphi)$$



The "Golden Ratio"

$$\frac{a+b}{a} = \frac{a}{b}$$

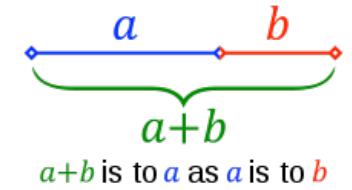
Number Φ

Is it important? Is it observed out there, besides the mathematical realm?

Yes, indeed! It is present in many domains! From math to nature, music, art, architecture, etc.



The "Golden Ratio"



Number Φ

Mathematics:

Interesting features!

$$\varphi = \sqrt{1 + \sqrt{1 + \sqrt{1 + \sqrt{1 + \dots}}}}$$

$$1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \ddots}}}}$$



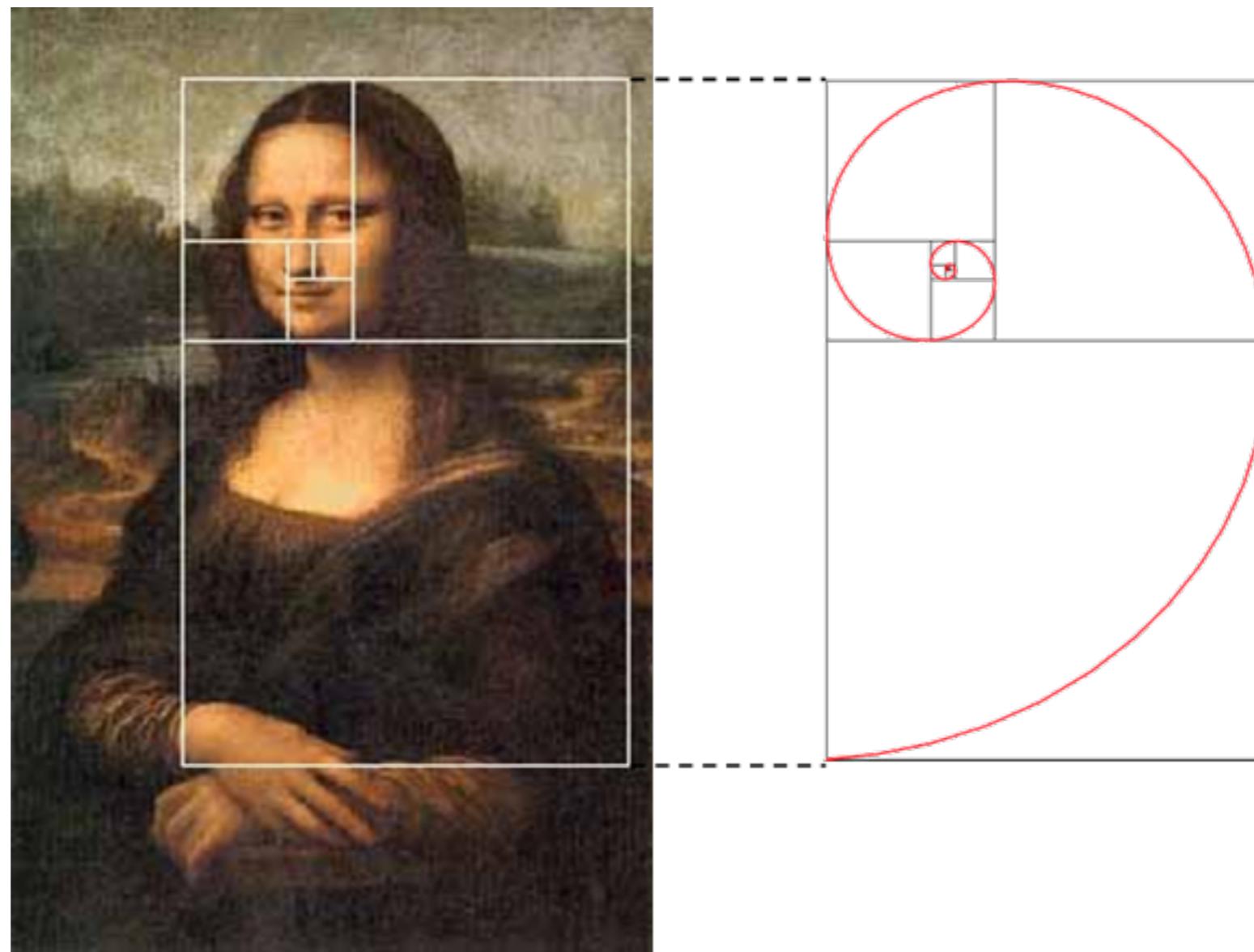
The Golden Ratio

Number φ

In Art

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b





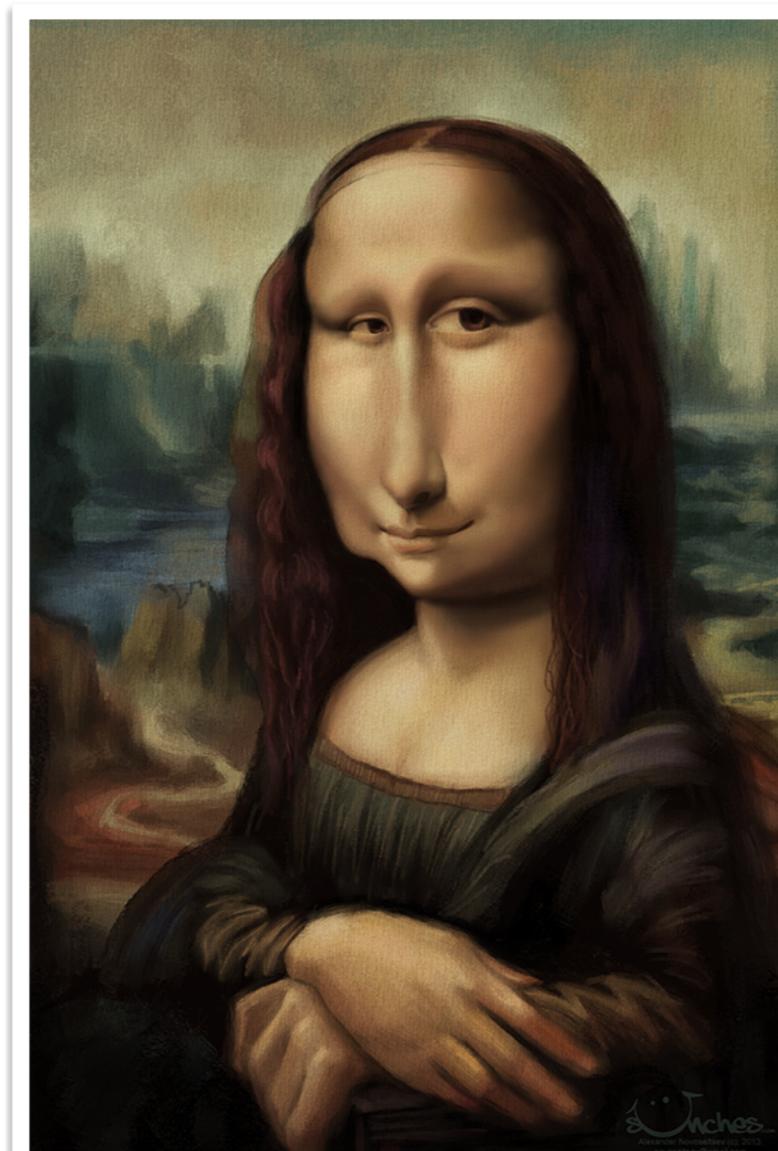
The Golden Ratio

Number φ

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

without proportion





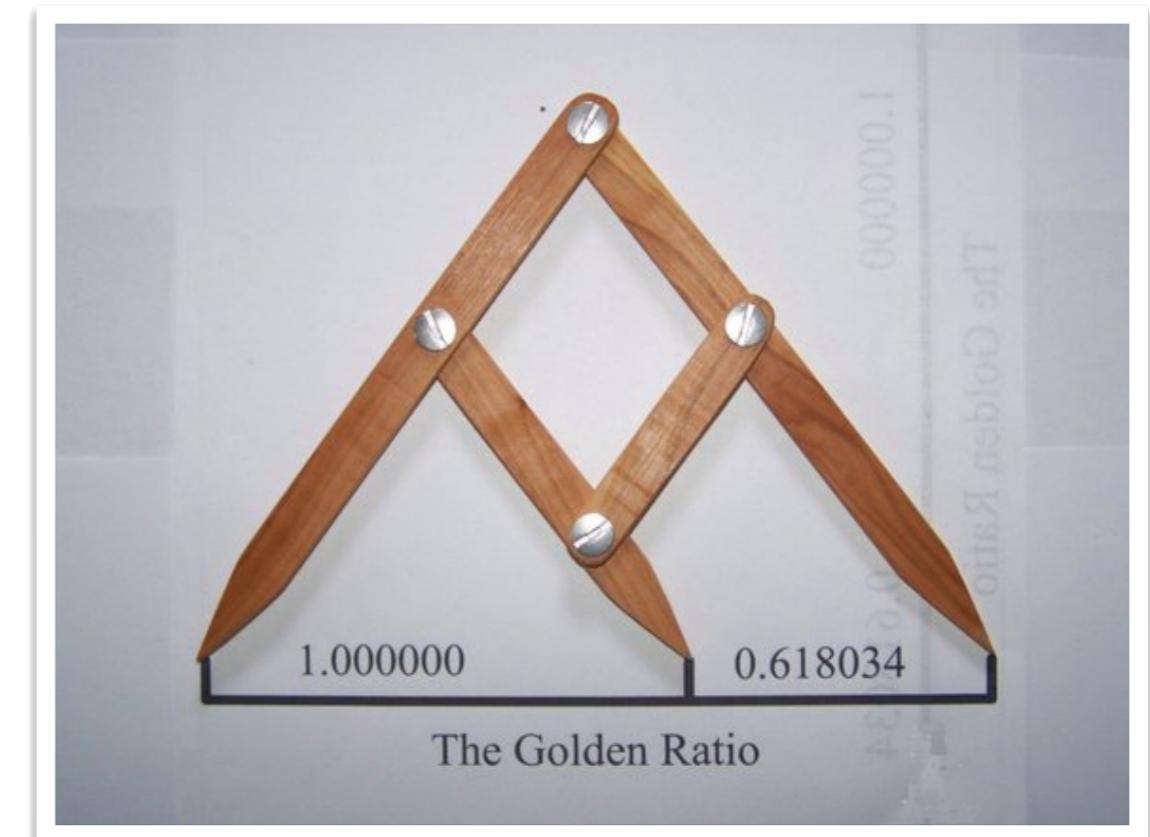
The Golden Ratio

Number Φ

Art:



$$\frac{a+b}{a} \text{ is to } a \text{ as } a \text{ is to } b$$





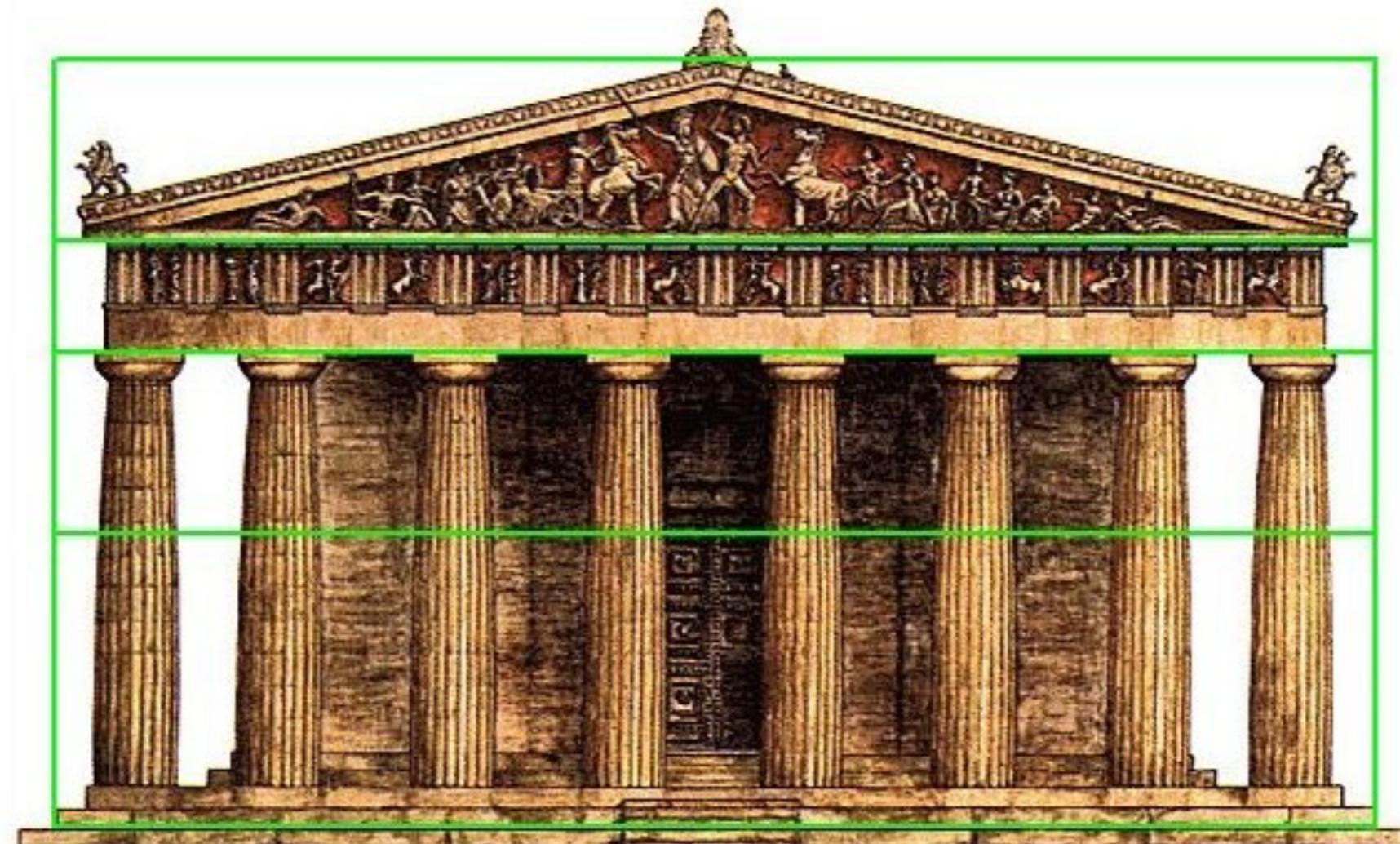
The Golden Ratio

Number Φ

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

Architecture: since the Greeks



THE PARTHENON

Phil Ponder



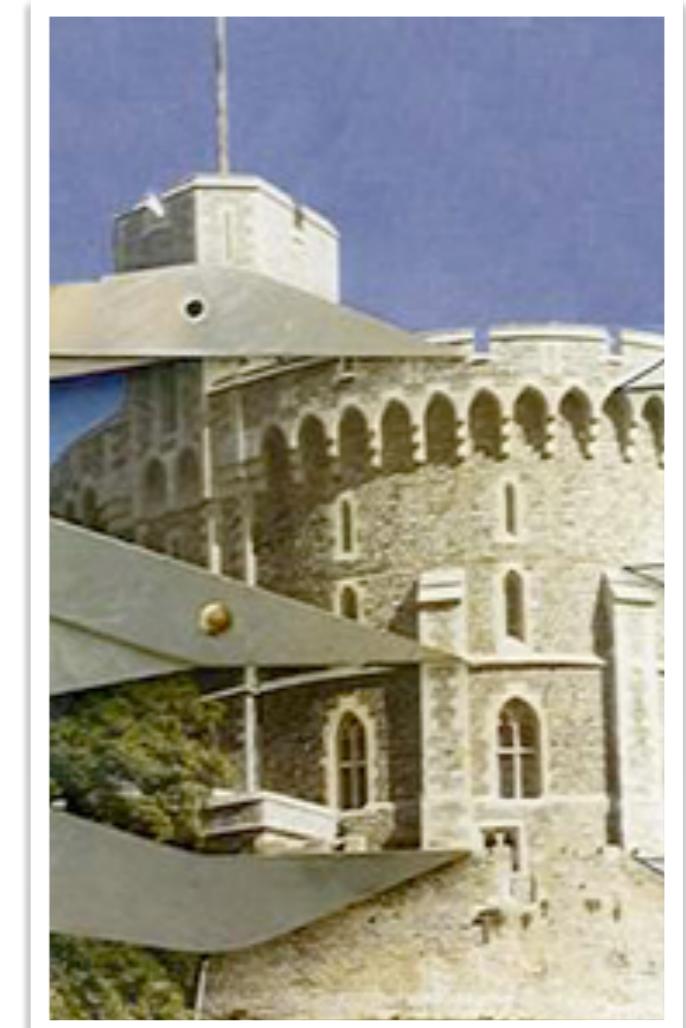
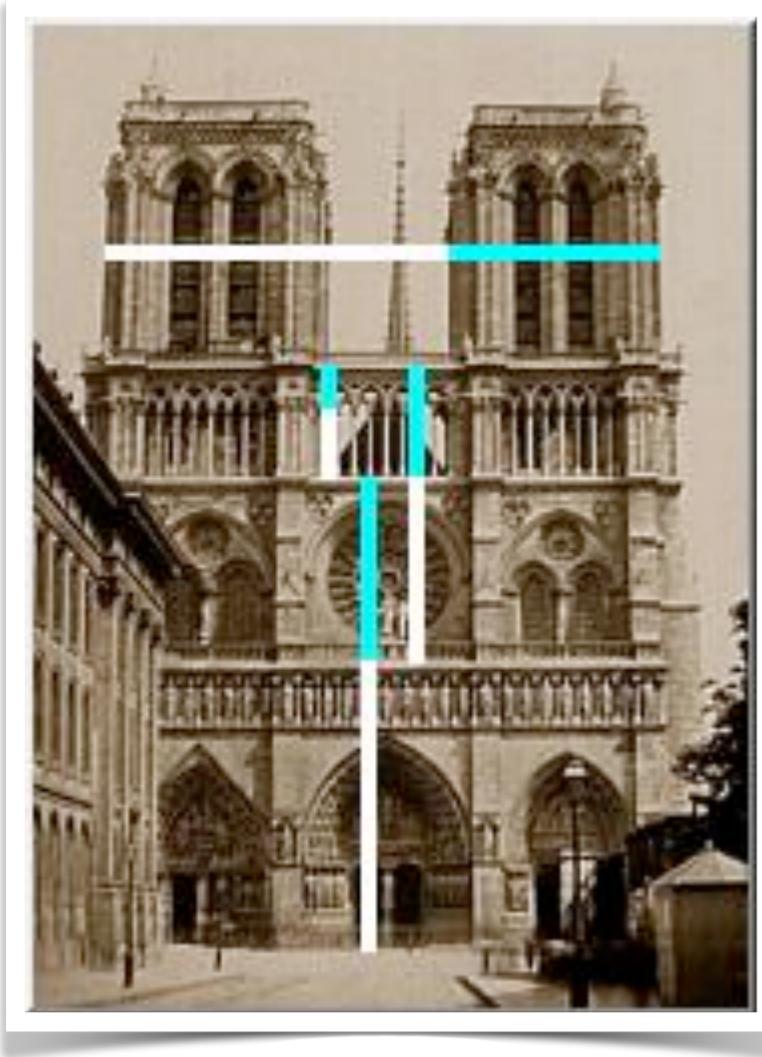
The Golden Ratio

Number Φ

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

Architecture:





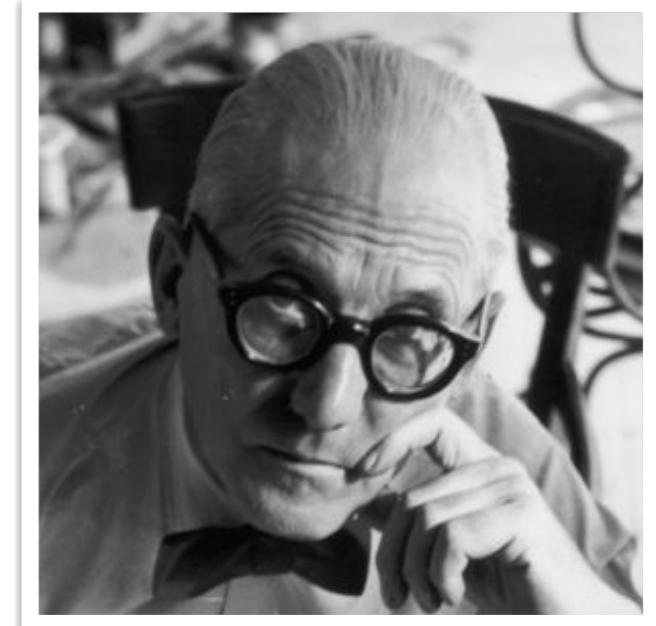
The Golden Ratio

Number φ

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

Architecture:



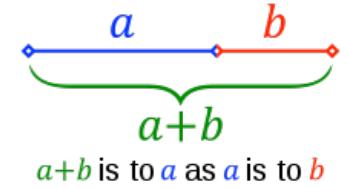
Le Corbusier



The Golden Ratio

Number Φ

exercise

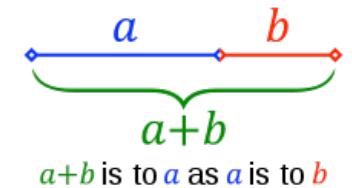


$a+b$ is to a as a is to b





The Golden Ratio



Number Φ

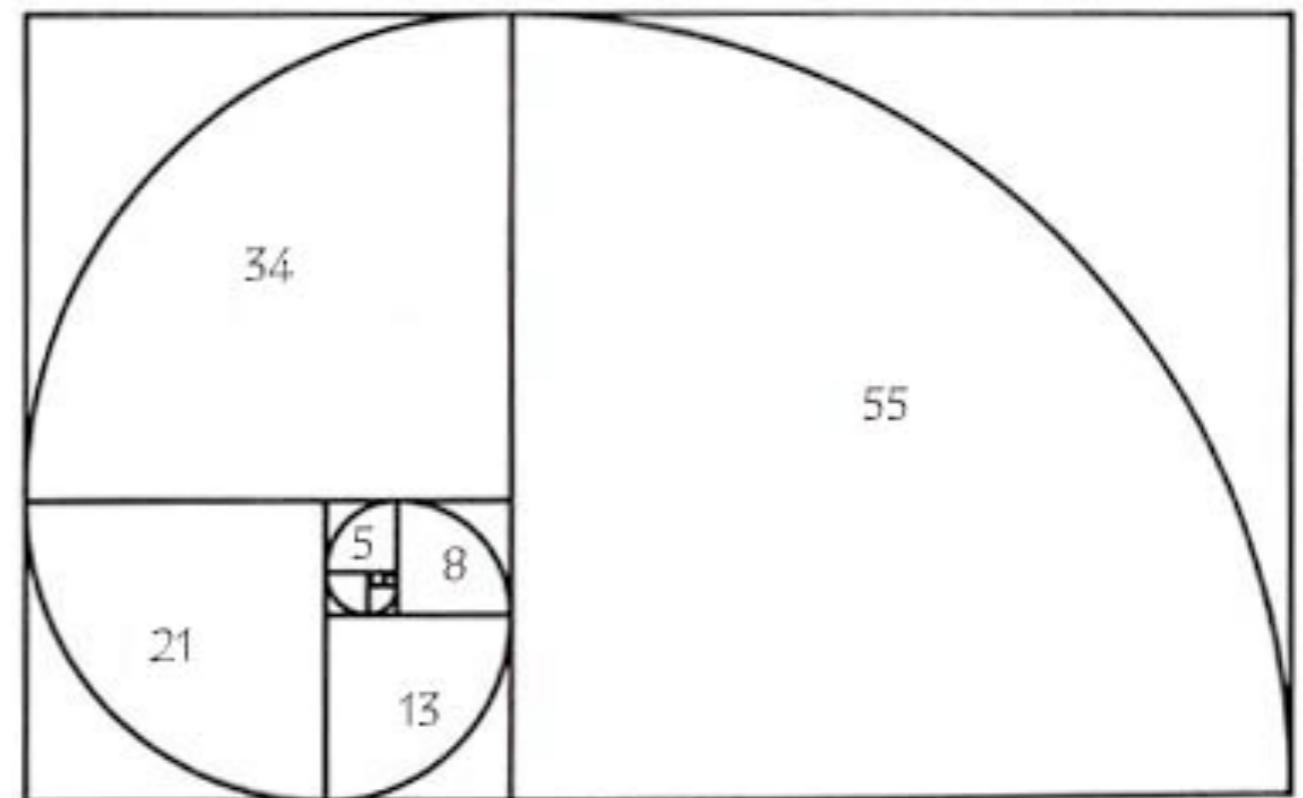
Mathematics: The Fibonacci sequence

$$F(1) = 1 \quad 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, \dots$$

$$F(2) = 1$$

$$F(n) = F(n-1) + F(n-2)$$

$$\frac{F(n+1)}{F(n)} \approx \Phi$$





The Golden Ratio

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

Number Φ

Nature:



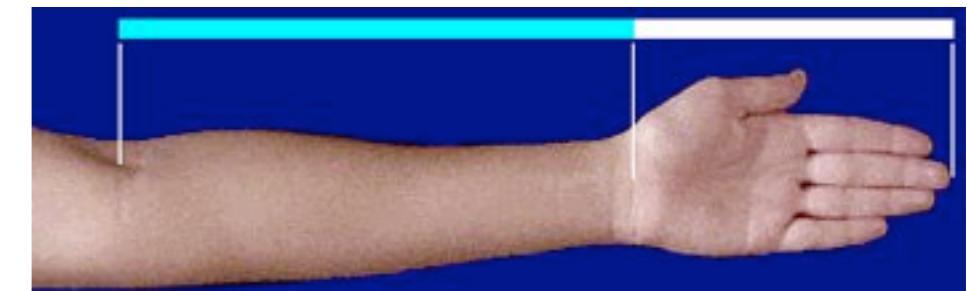
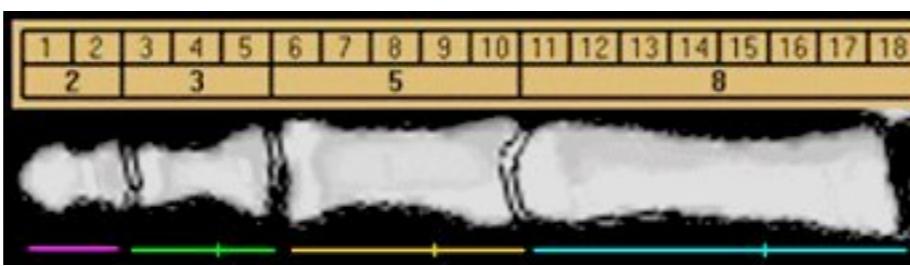
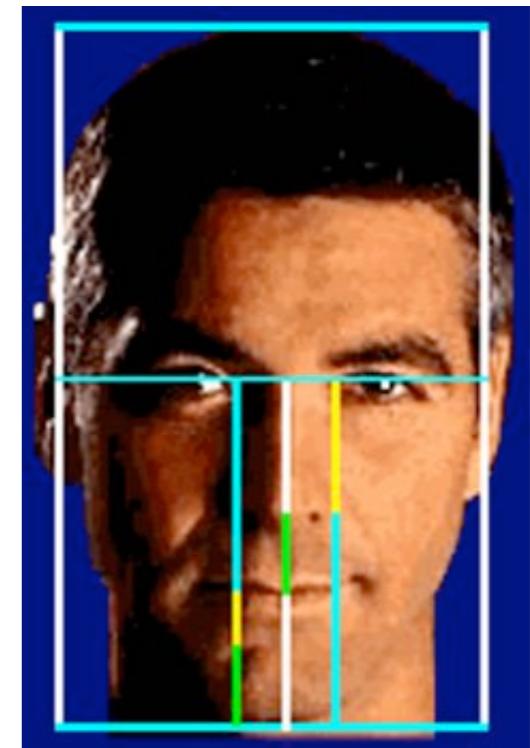
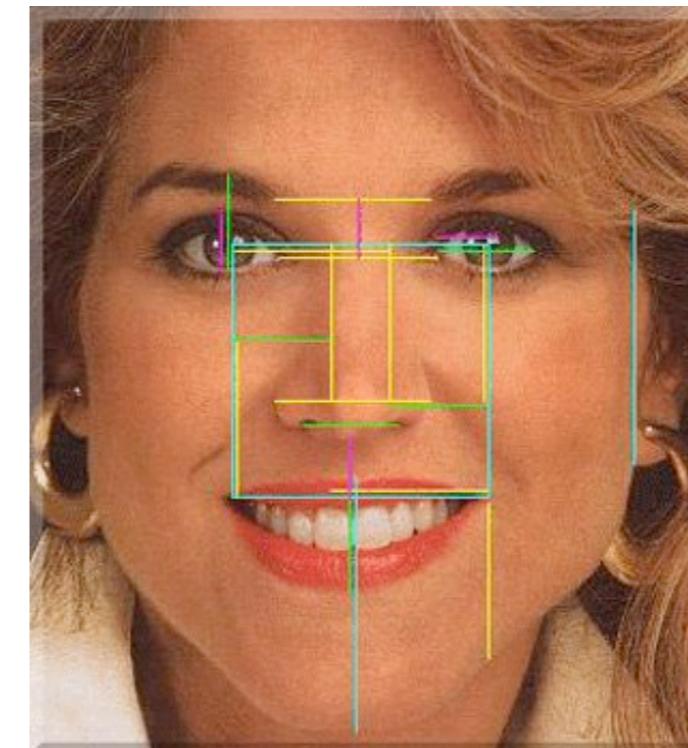
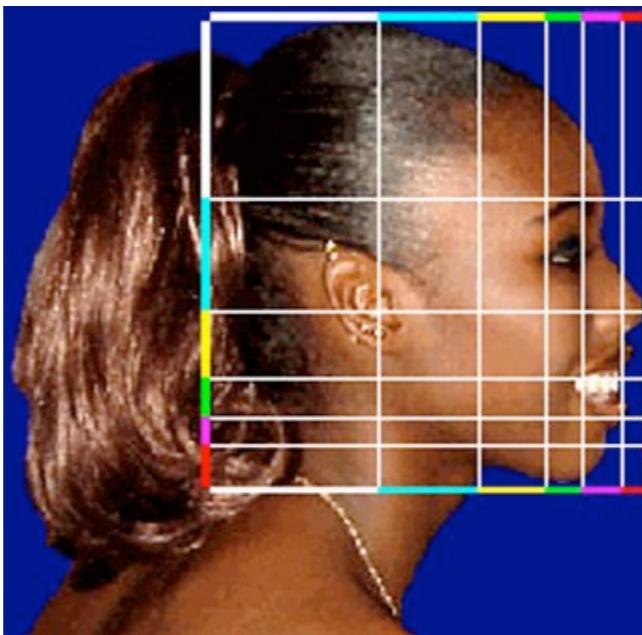
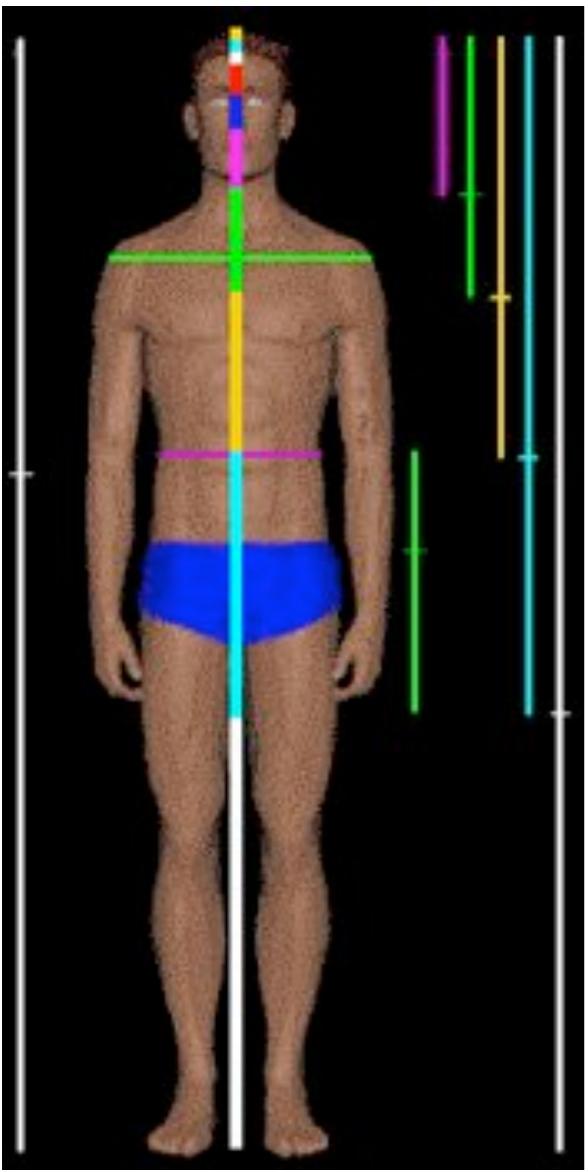


The Golden Ratio

Number Φ

Human body:

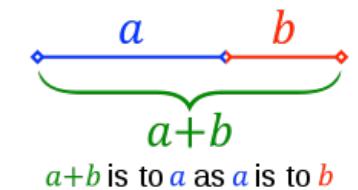
$$\frac{a+b}{a} \text{ is to } a \text{ as } a \text{ is to } b$$



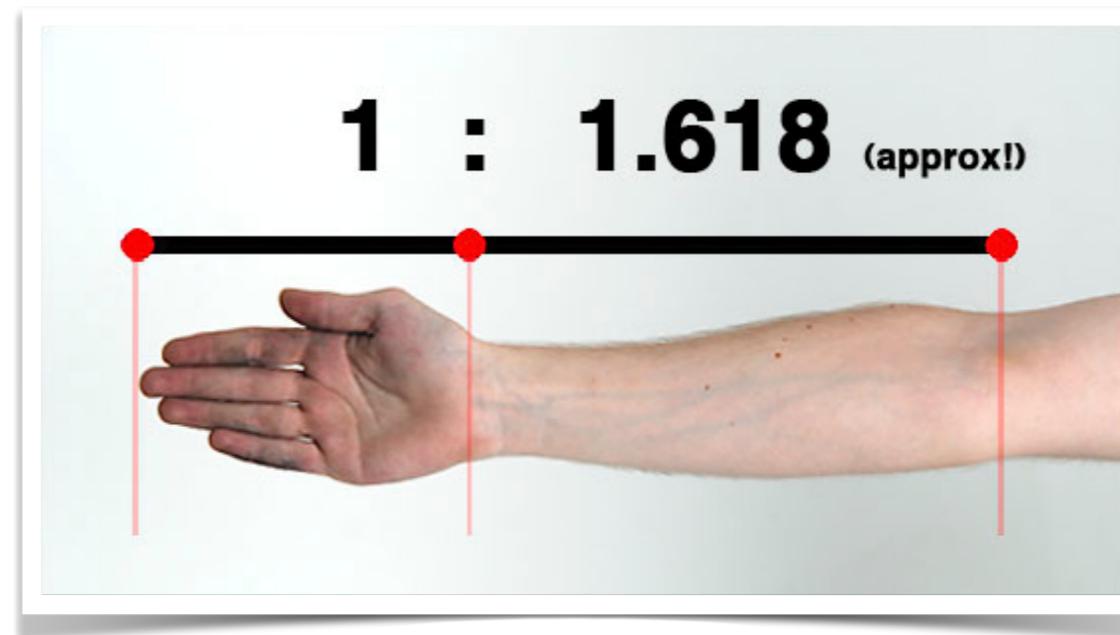
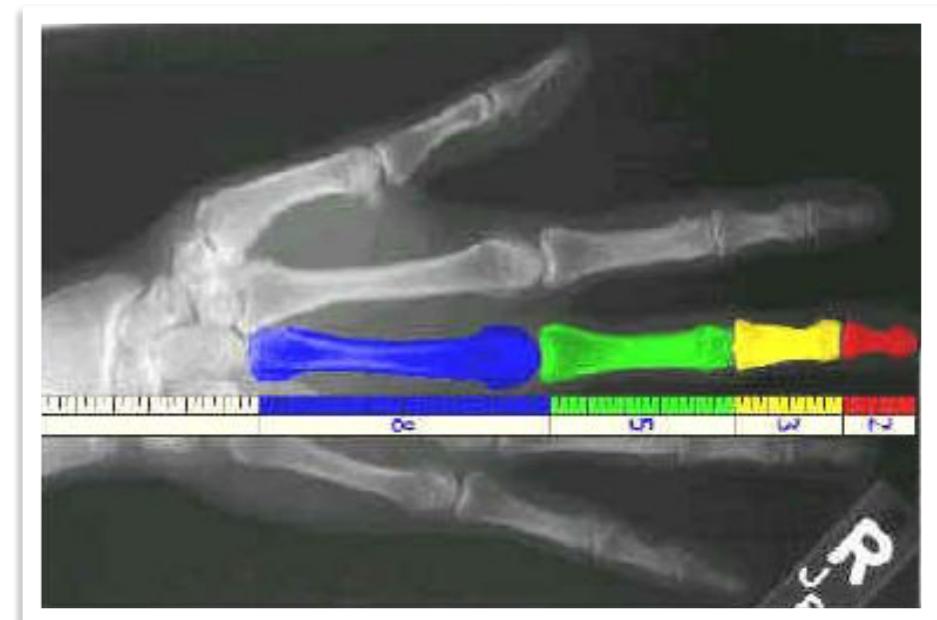
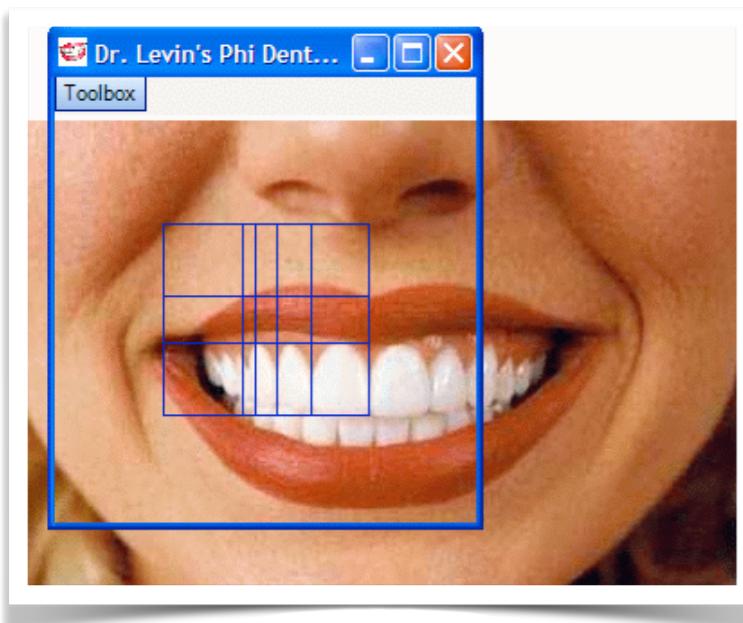


The Golden Ratio

Number φ



Human body:





The Golden Ratio

$$\frac{a+b}{a} = \frac{a}{b}$$

$a+b$ is to a as a is to b

Number Φ

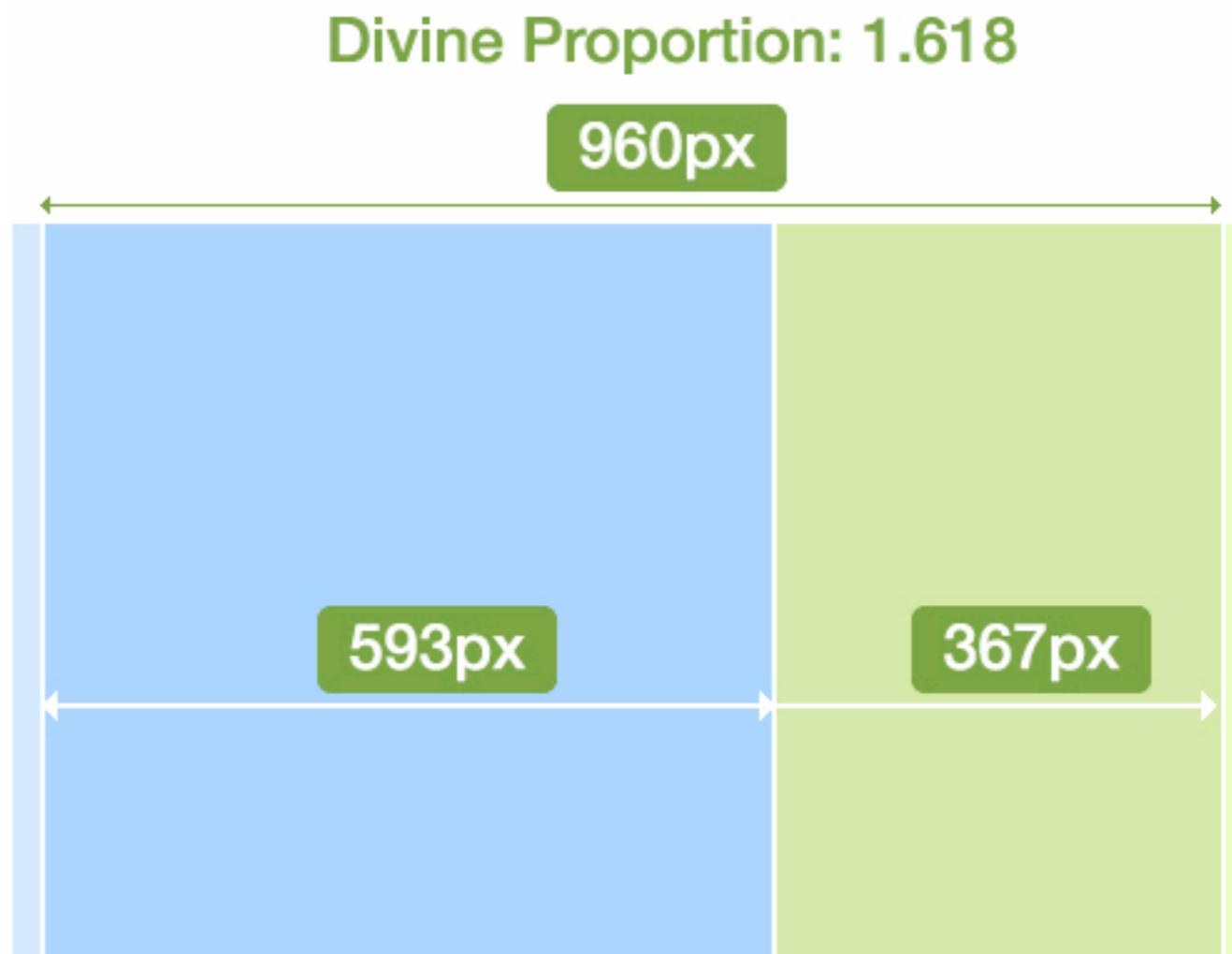
Objects and equipment:





The Golden Ratio

Application in the design of GUI:



$$960\text{px} : 1.618 = 593\text{px}$$
$$960\text{px} - 593\text{px} = 367\text{px}$$

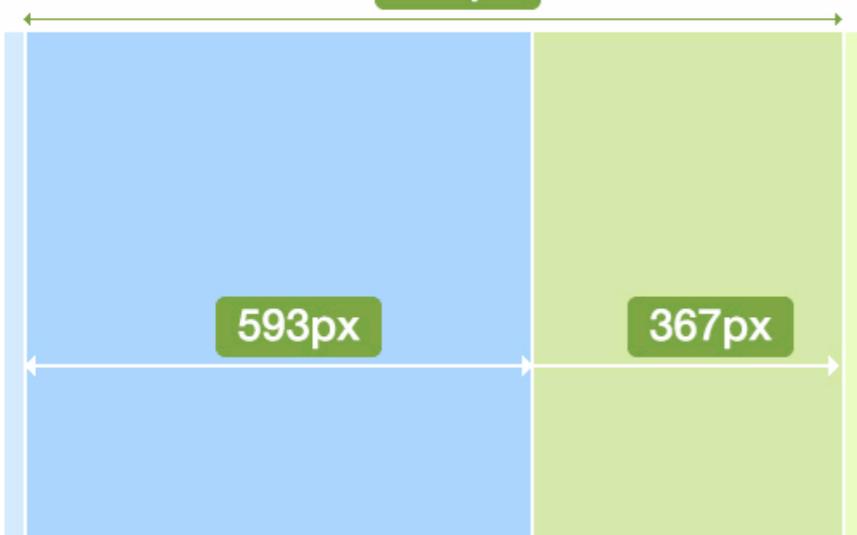


The Golden Ratio

Application in the design of GUI:

Divine Proportion: 1.618

960px



$$960\text{px} : 1.618 = 593\text{px}$$

$$960\text{px} - 593\text{px} = 367\text{px}$$

404 USER EXPERIENCE DESIGN

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STICKY FEATURED ARTICLE

Wednesday May 7, 2008

Welcome to 404.

by Jared Christensen

Yeah, we're at it again.

404UXD, formerly [The Geniant Blog](#), is the new home of our Dallas-based user experience group. For those of you following along at home, you'll know that in the latest episode of our little telenovela we ([Geniant](#)) were acquired by [EMC](#) last July. And prior to that, in 2006, Geniant acquired [Bright Corner](#), which company was more or less the humble genesis of our UX group.

[Continue reading...](#)

Article posted by Jared Christensen in Culture, Design . Comments (3)

Tuesday May 27, 2008

[Virtual Cable™ Car Navigation →](#)

This is too cool: a thin red "cable" sits above the road, in your peripheral vision, tracing the route to your destination. It shows you the path you need to take far ahead of you, even in the dark. What a great visualization idea!

Link posted by Jared Christensen in Interface, Visualization . Comments (1)

Friday May 23, 2008

[Retro Cosmic](#)

404 UXD is a team of user experience professionals working in Room 404 (literally) of our Dallas, TX office. We are part of EMC's User Experience Design competency.

[Learn more...](#)

On Our Calendar... View all

Jun 23, 2008: An Event Apart at Boston Marriott Copley

In late 2005, two internationally recognized web authorities—web standards godfather Jeffrey Zeldman...

Aug 12, 2008: User Experience Week 2008 at The Palace Hotel

UX Week is the premier user experience conference, and in 2008 we consider what it takes to create g...



The Golden Ratio

Application in the design of GUI:

This screenshot shows the homepage of the 404 User Experience Design website. At the top, there's a navigation bar with links to EMC.com, About 404, Archives, and Subscribe, along with a search bar. A green banner at the top features a sticky featured article titled "Welcome to 404." Below the banner, there are several blog posts listed. One post is highlighted with a red box and labeled "630px". Another post is highlighted with a green box and labeled "593px". The overall layout is clean and modern.

Wednesday May 7, 2008
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Retro Cosmic

This screenshot shows the same website layout as the first one, but with different visual proportions. The overall width of the page is narrower, and the individual components are also smaller. The "Welcome to 404" article is highlighted with a red box and labeled "330px". The "Virtual Cable" article is highlighted with a green box and labeled "593px". The overall layout appears more compact and focused.

-31
FEATURED ARTICLE

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Welcome to 404.
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The Rule of Thirds

Rule of thumb in image composition

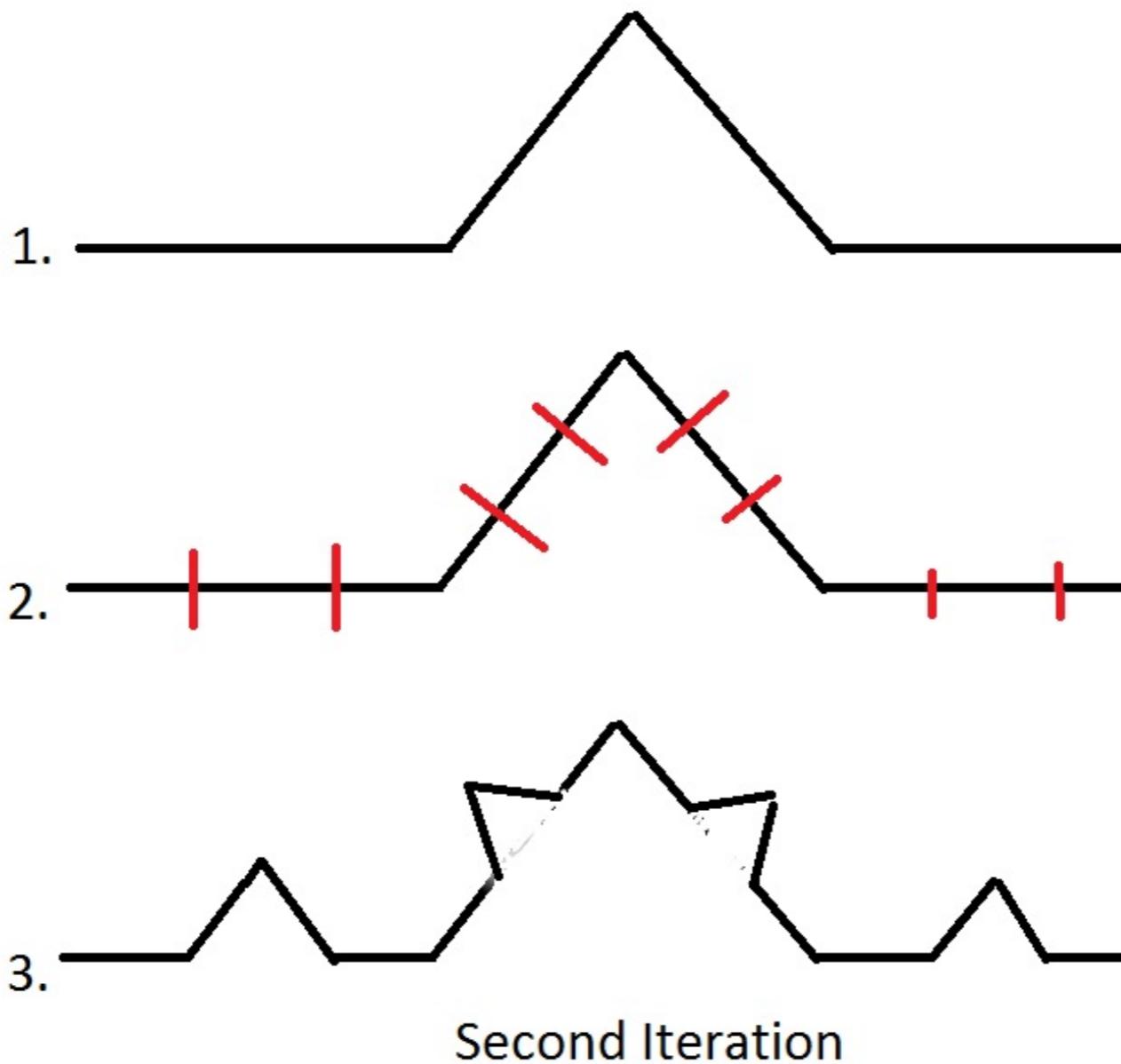


Proponents of the technique claim that aligning a subject with the intersection points creates more tension, energy and interest in the composition.



Self-Similarity and Fractals

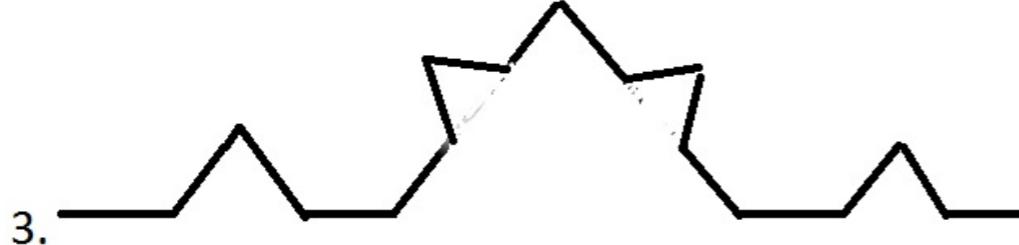
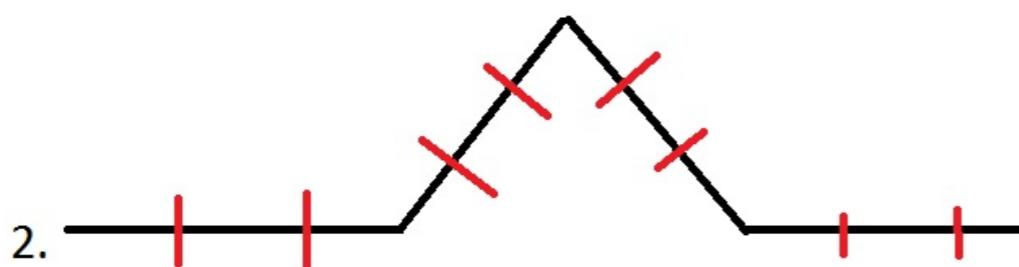
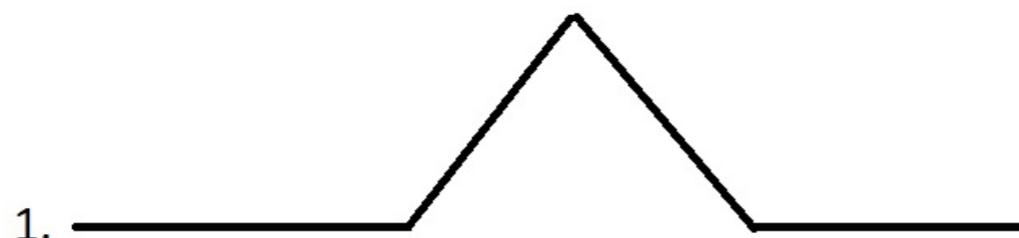
Induce beauty and represents well the patterns of nature.



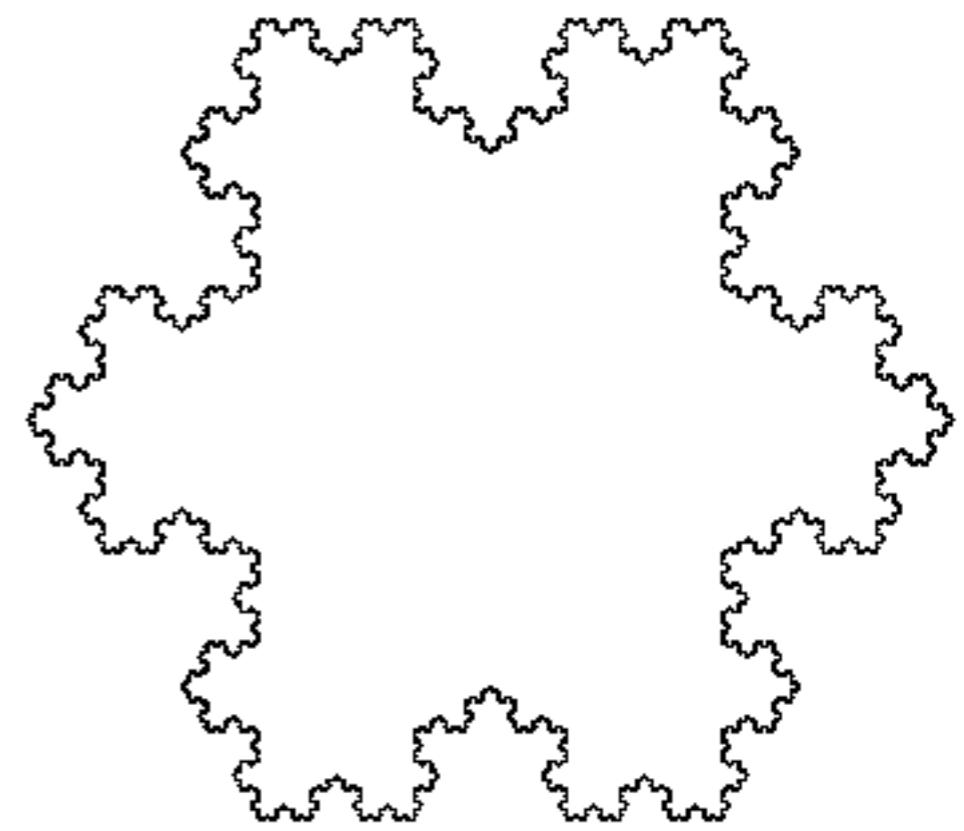


Self-Similarity and Fractals

Induce beauty and represents well the patterns of nature.



Second Iteration



Recursively application of simple rules will induce rich and complex patterns of beauty. Nature is also fractal.



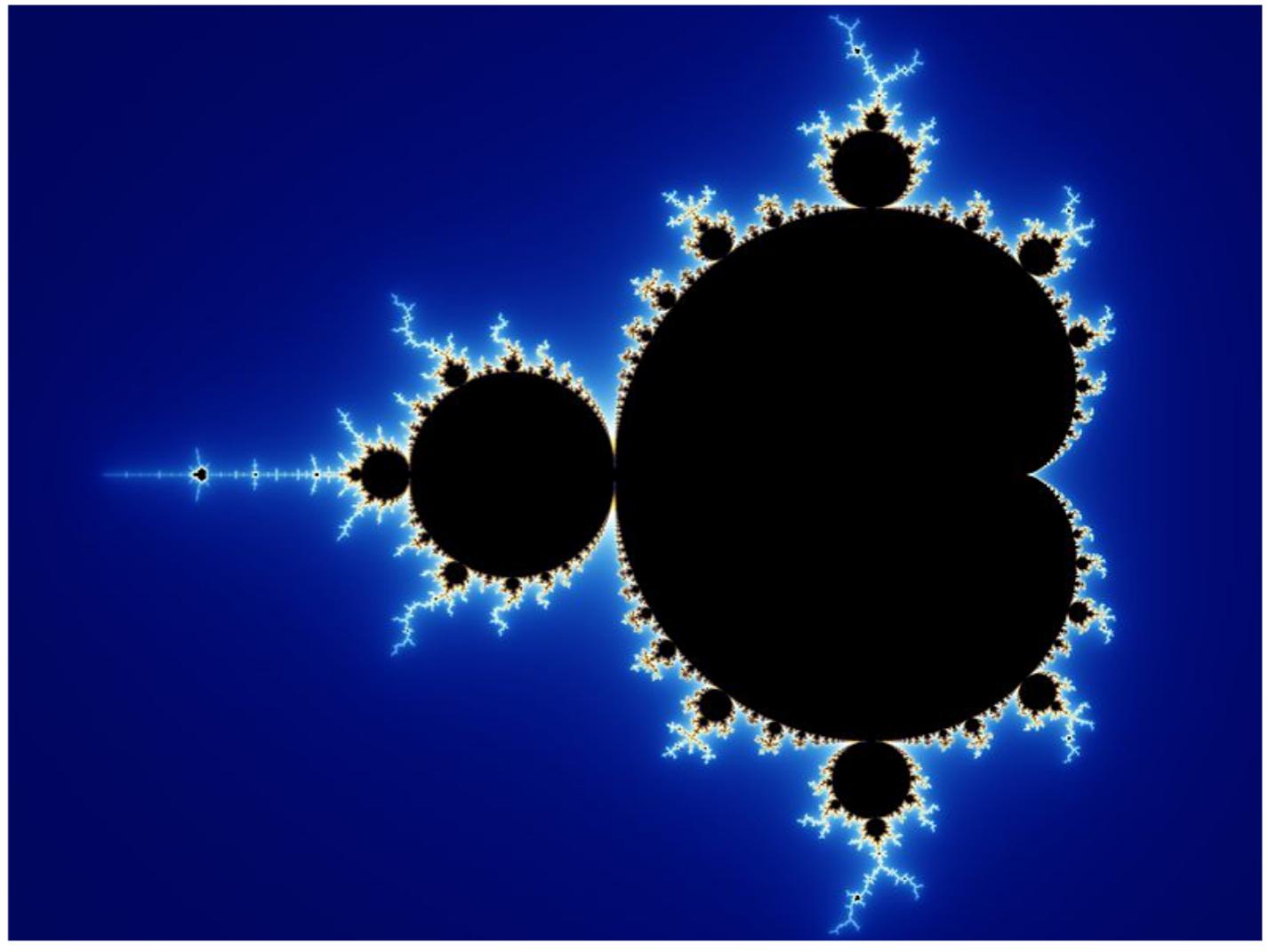
Self-Similarity and Fractals

Benoît Mandelbrot



1924 – 2010

$$Z = Z^2 + C$$



The Mandelbrot Set



Fractals and Beauty





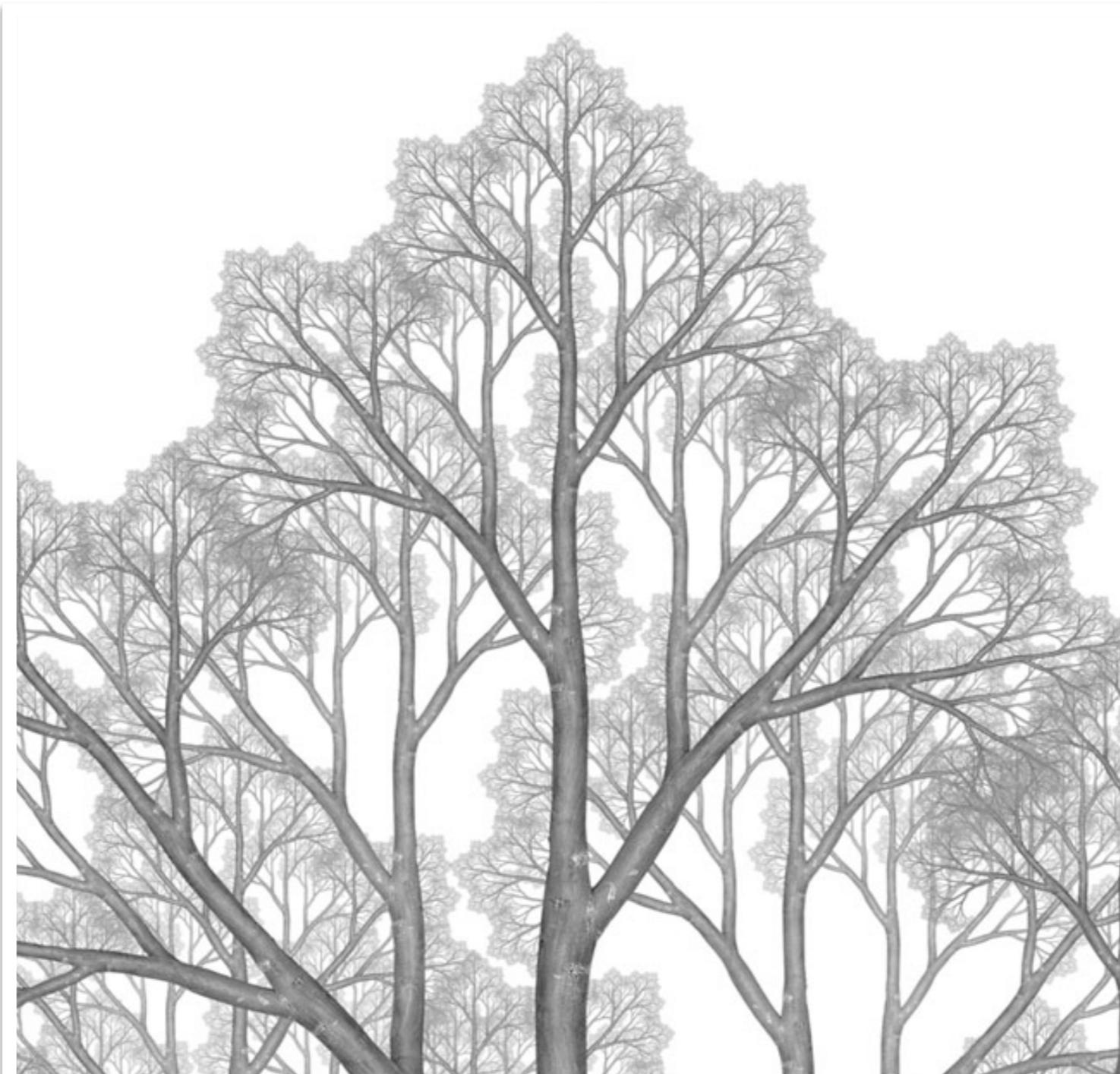
Fractal Nature



Mandelbrot and Wheeler 1983



Fractal Nature



Fractal Tree