

# Responsive Web Design

Grundläggande principer

Nils Ehrenberg

# Agenda

- Grundläggande principer
  - Röd tråd
  - Hierarkier
- Responsive Web Design
  - Responsive eller Adaptive?
  - Mobile first

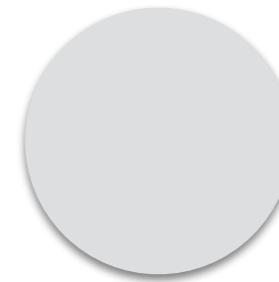
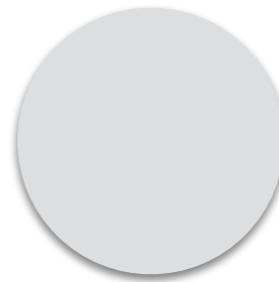
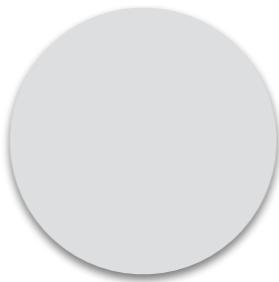
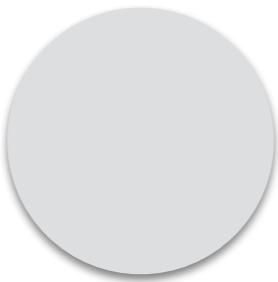
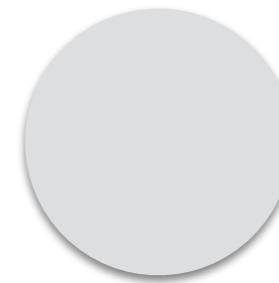
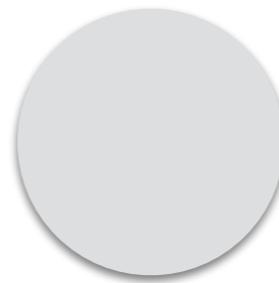
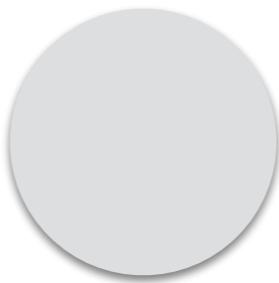
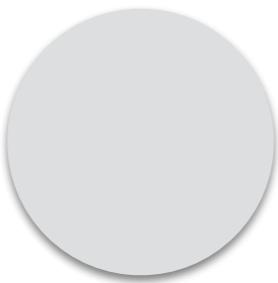
# Den Röda Tråden

- Gör ert förarbete
  - Vem använder sidan?
  - I vilket syfte?
  - I vilken kontext?
  - Hur använder de sidan?

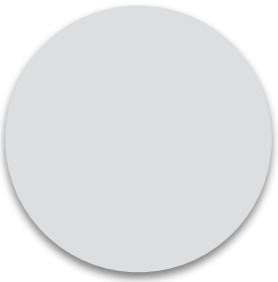
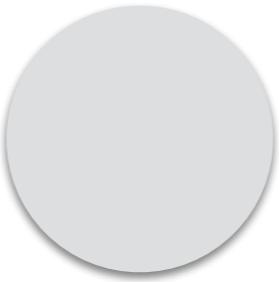
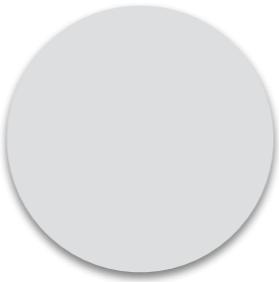
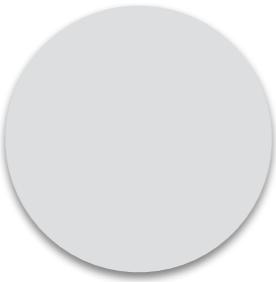
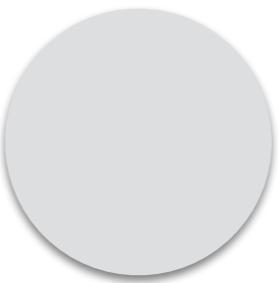
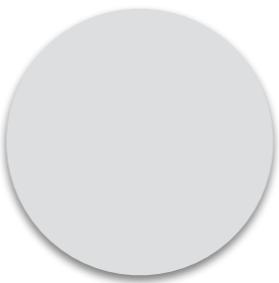
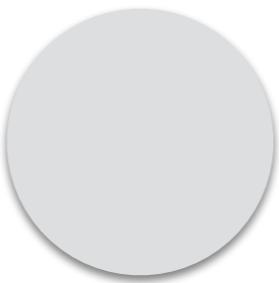
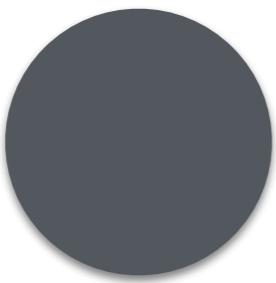
# Hierarkier

- Var tittar du?
- Hur läser du?
- Hur kan vi arbeta med hierarkier?
  - Struktur
  - Kontraster
  - Färger
  - Typsnitt

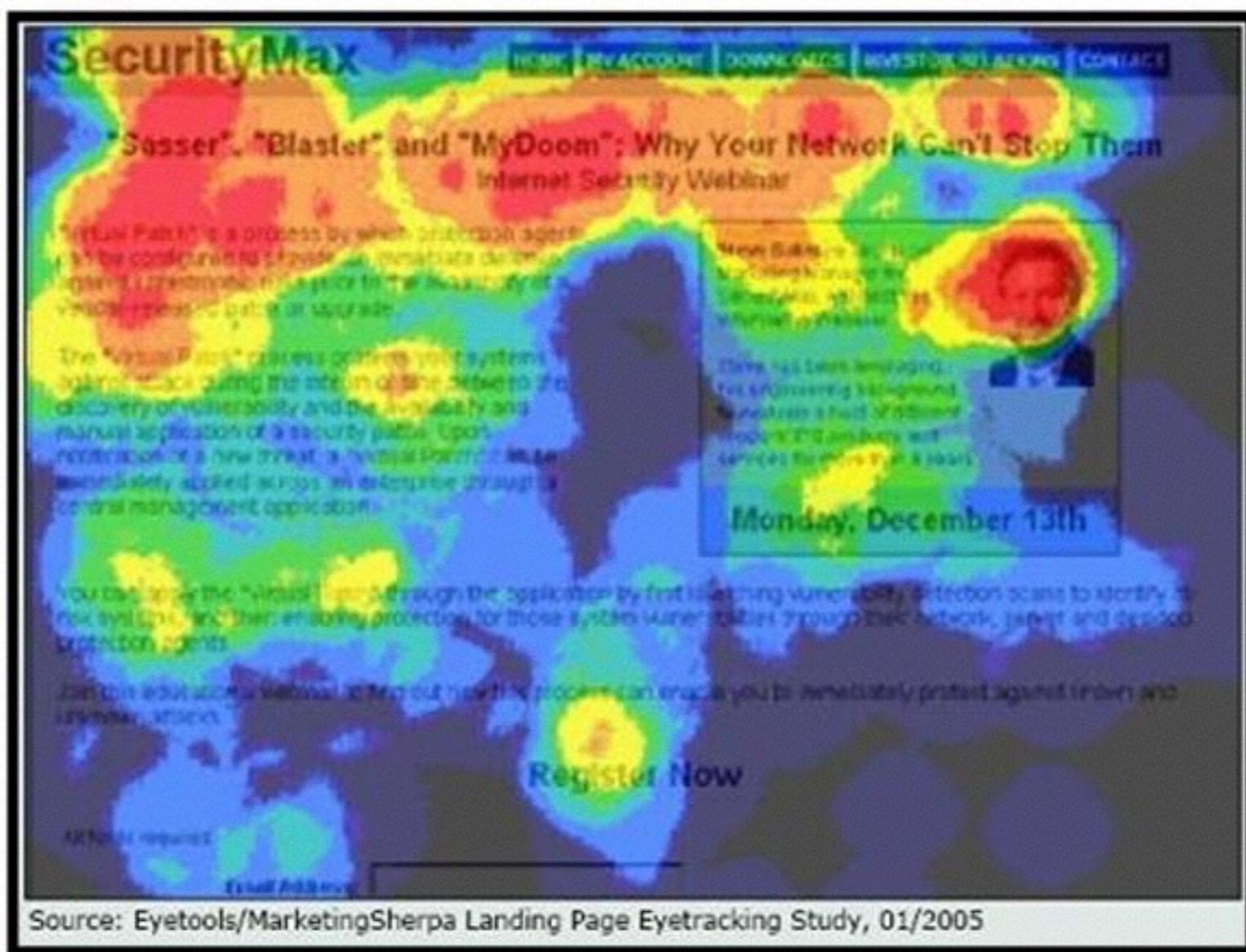
# Hierarkier



# Hierarkier

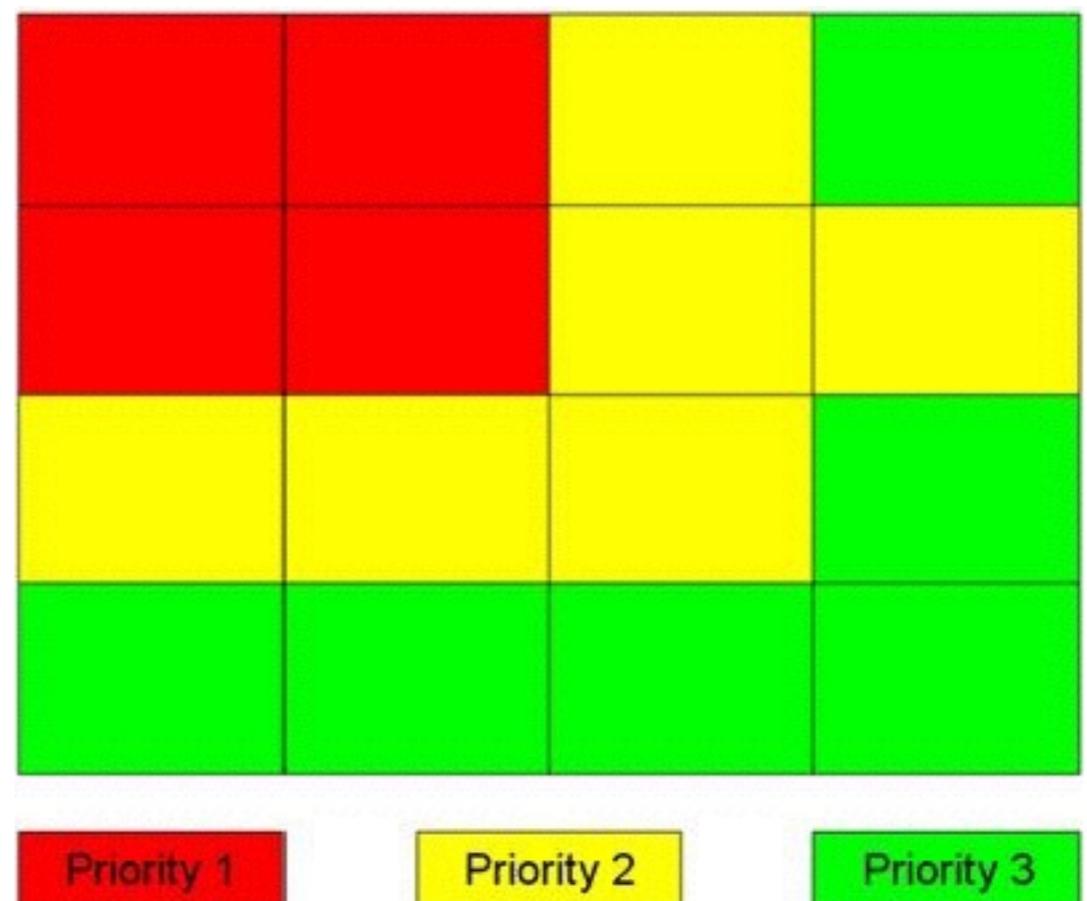


# Eye-tracking



# Eye-tracking

- Läser eller skummar.
- Hur fokuserad användaren är.
- Kan inte se om användaren egentligen är intresserad.
- Varför de tittar på det.



# F-form

We Like to Read from  
Left to Right



AND FROM TOP TO BOTTOM

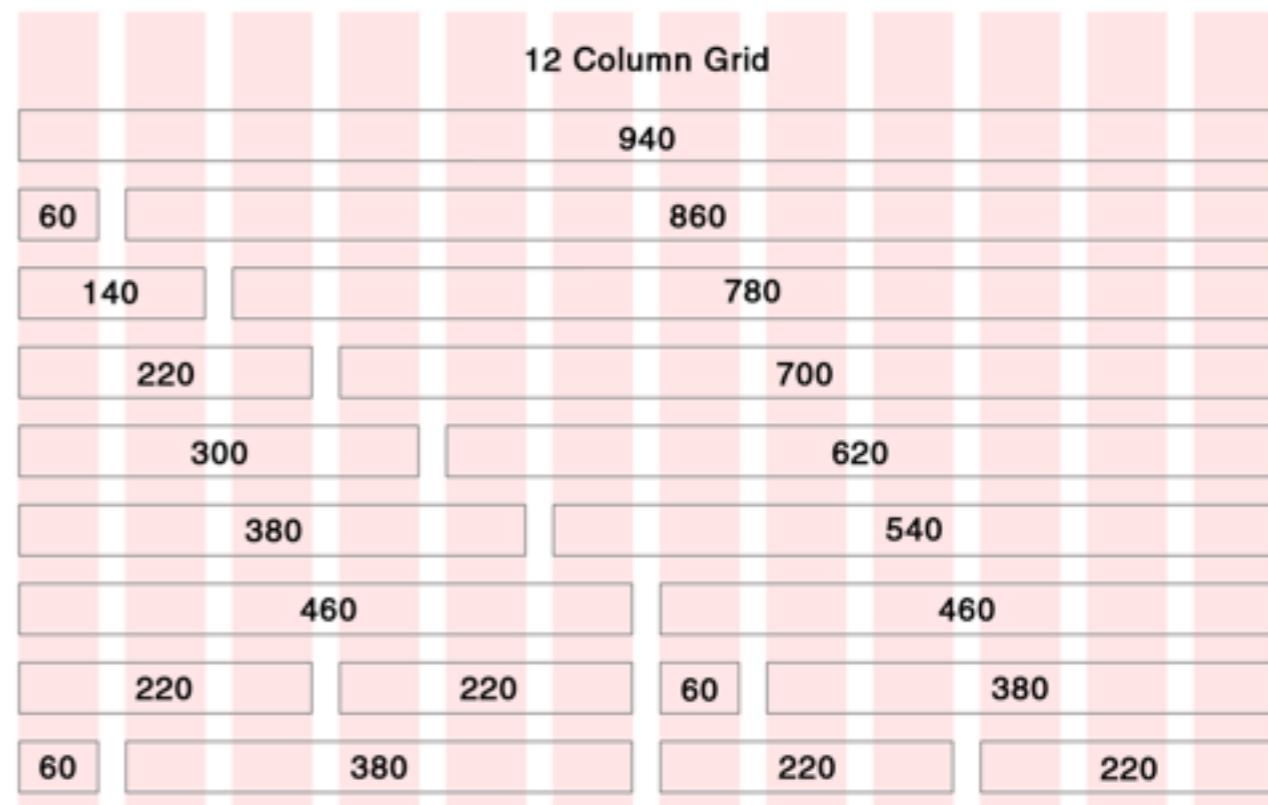
"F" LAYOUT

# Mönster

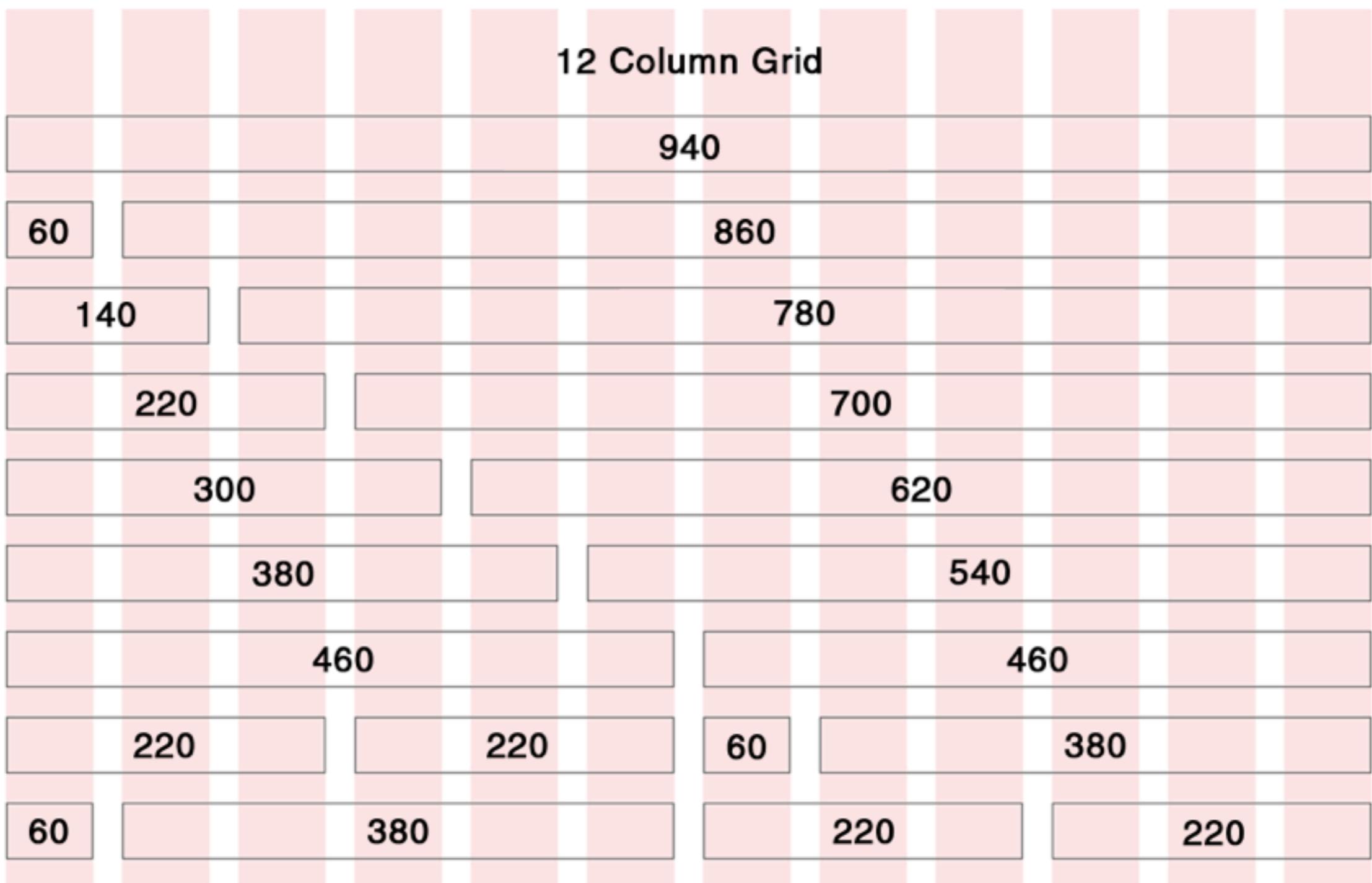
- Vi ser mönster i allting
  - Grids
  - Menyer
  - Färger
  - Kontraster

# Grid

- Skapa struktur på en sida med hjälp av rutnät.



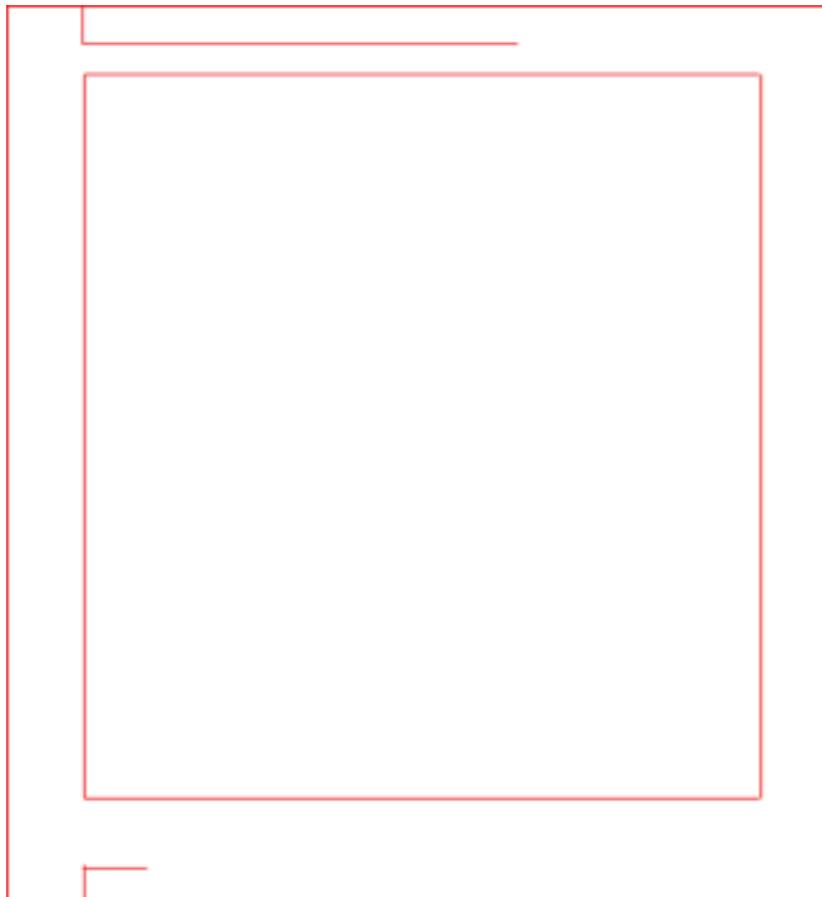
# Flexbox 960 Grid



# Olika grid

- Manuscript
- Column
- Modular
- Hierarchical

# Manuscript grid



https://en.wikipedia.org/wiki/Main\_Page

Search Wikipedia

Today's featured article

The [Hastings Line](#) is a secondary railway line in Kent and East Sussex, England, linking [Hastings](#) with the main town of [Tunbridge Wells](#), and from there into London via Tonbridge and Sevenoaks. Although the line primarily carries passengers, a [gypsum](#) mine served by the railway is a source of freight traffic. Passenger trains on the line are operated by [Southeastern](#). The railway was built by the [South Eastern Railway](#) in the early 1850s across the difficult terrain of the [High Weald](#). Supervision was lax, and contractors skimped on the lining of the [tunnels](#), causing deficiencies that showed up after the railway had opened. Rectifications included a restricted [loading gauge](#) along the line, requiring the use of specially made [rolling stock](#). Served by [steam locomotives](#) from the time of opening until the late 1950s, passenger services were then taken over by a fleet of [diesel-electric multiple units](#) built to the line's loading gauge. Freight was handled by [diesel locomotives](#), also built to fit the loading gauge. The diesel-electric units were in service until 1980, when the line was electrified and the most severely affected tunnels were [singled](#). ([Full article...](#))

Recently featured: [Charles Domery](#) • [Silky sitaka](#) • [U.S. Route 41 Business \(Marquette, Michigan\)](#)

[Archive](#) • [By email](#) • [More featured articles...](#)

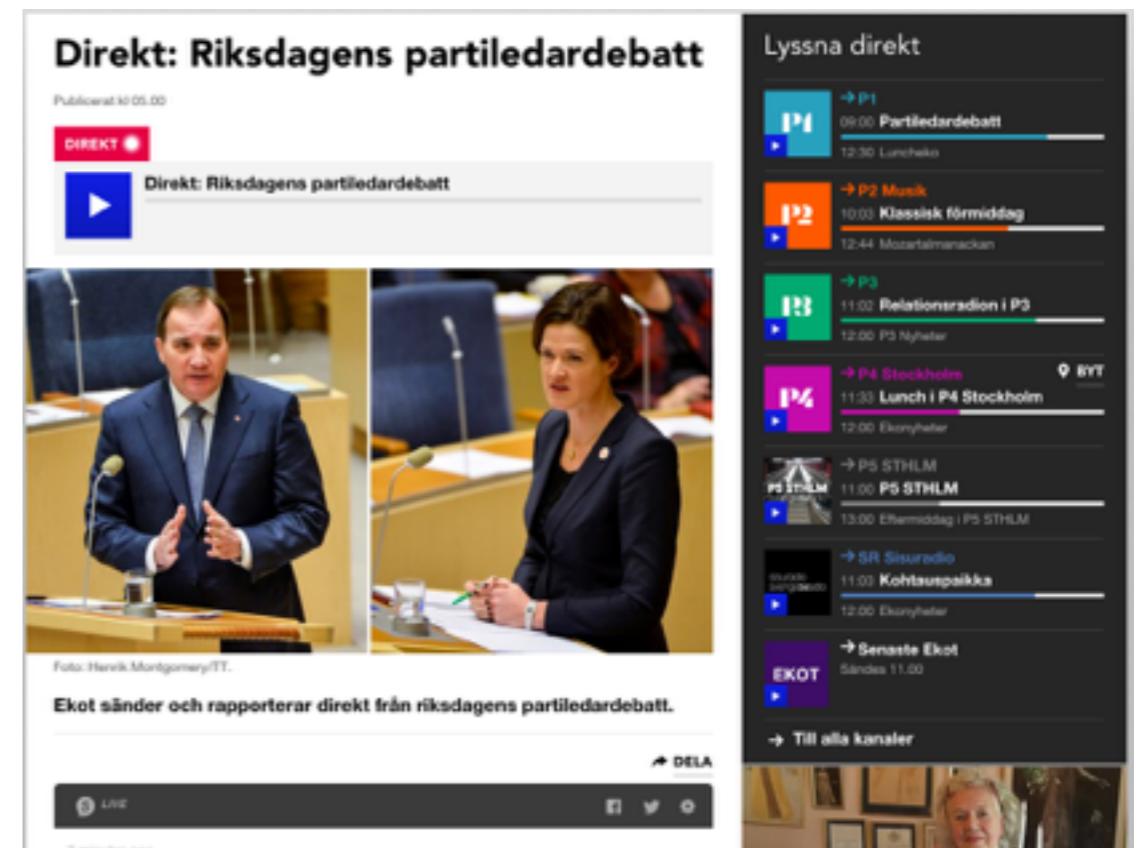
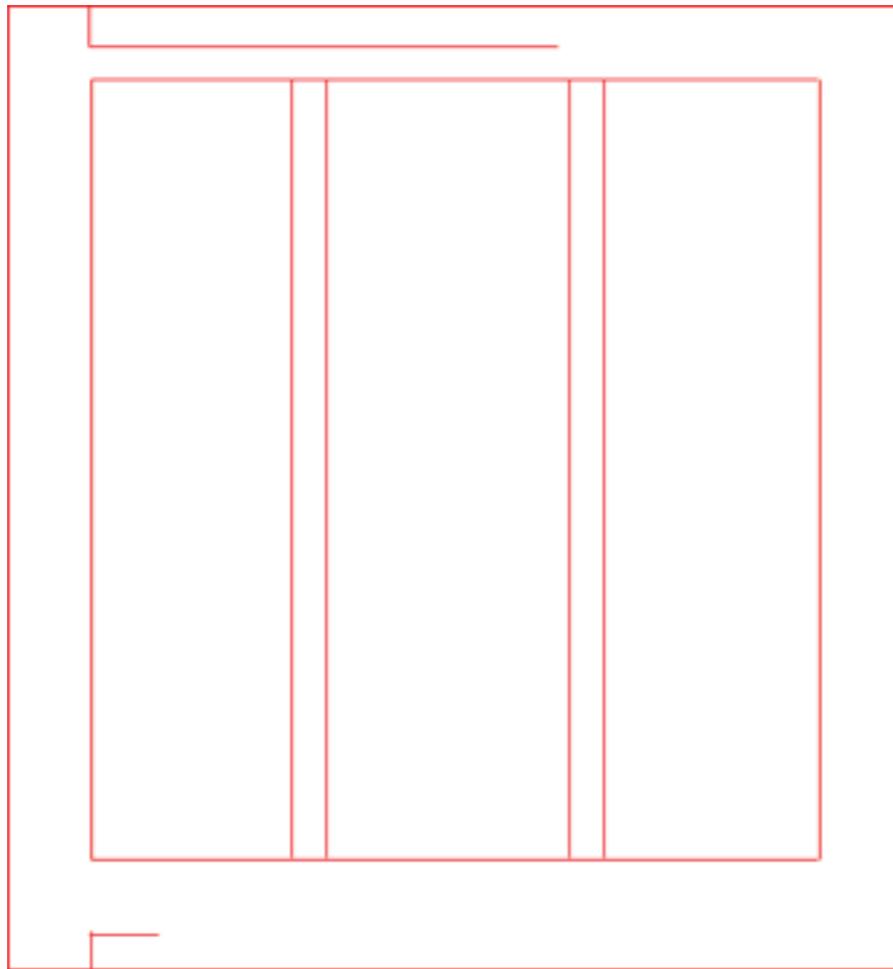
In the news

- Alexander Lukashenko (pictured) is [re-elected](#) President of Belarus for a fifth term.
- At least 105 people are killed and more than 400 others injured in [twin bombings](#) at a peace rally in [Ankara](#), Turkey.
- The [Tunisian National Dialogue Quartet](#) is awarded the [Nobel Peace Prize](#).
- [Svetlana Alexievich](#) is awarded the [Nobel Prize in Literature](#).
- [Tomas Lindahl](#), [Paul Modrich](#) and [Aziz Sancar](#) are awarded the [Nobel Prize in Chemistry](#) for their work in the field of [DNA repair](#).

Ongoing events: [Russian military intervention in Syria](#) • [Southeast Asian haze](#) • [European migrant crisis](#)

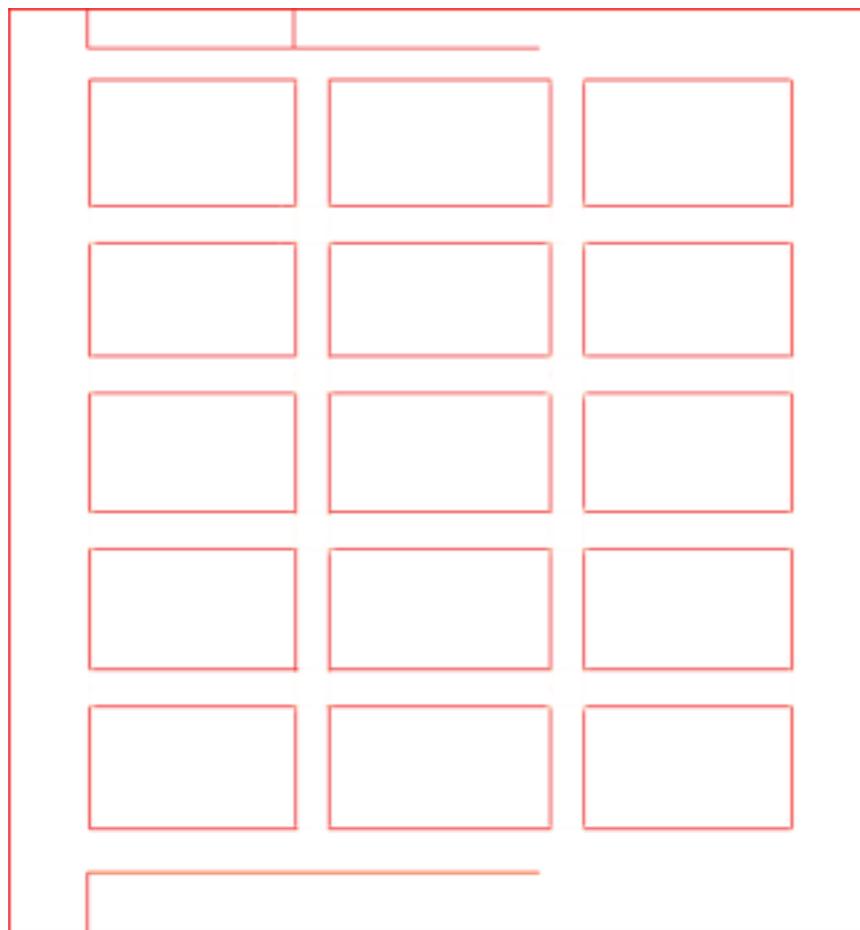
Bra till löptext och bilder.

# Column grid



Blandad information i olika kolumner

# Modular grid



Explore 178 live Comics projects



Steve Litchman: Volume 1  
Acceptable Comics

Life can be tough when you're a Monster... and Steve's dungeon is no exception! Join him and his friends in their first ever book!

9 Highlands Ranch, CO  
673% \$121,156 16  
funded pledged days to go



Dates: An Anthology of Queer Historical Fiction  
Margins Publishing

Dates is a queer historical fiction anthology focused on showcasing positive queer experiences throughout time and across the world.

9 Pittsburgh, PA  
249% \$24,820 9  
funded pledged hours to go



Muscle Temple #1: Pro Wrestling Comic  
Frank Gibson

Muscle Temple is a team of pro cartoonists and animators who love pro wrestling. We're making a printed collection of wrestling comics!

9 Los Angeles, CA  
13% \$2,752 26  
funded pledged days to go



I DRAW MANGA Sketchbook & Reference Guide  
Matt Mamocco

Sketchbook, Textbook, Reference Guide. The I DRAW MANGA Sketchbook combines all three to teach creativity and animation.

9 Chicago, IL  
382% \$36,307 16  
funded pledged days to go



S.P.O.R. BLUES YEARS  
Carol (Kiki) Burnell

The collected graphic novel of the underground comic of bluesmen via Minnows



Nine Comic for Thought Bubble 2015  
Zeta

Nine is a different full color comic



Monologue  
Stuart John McCune

A 24page full colour comic book told through the narrative devices of the

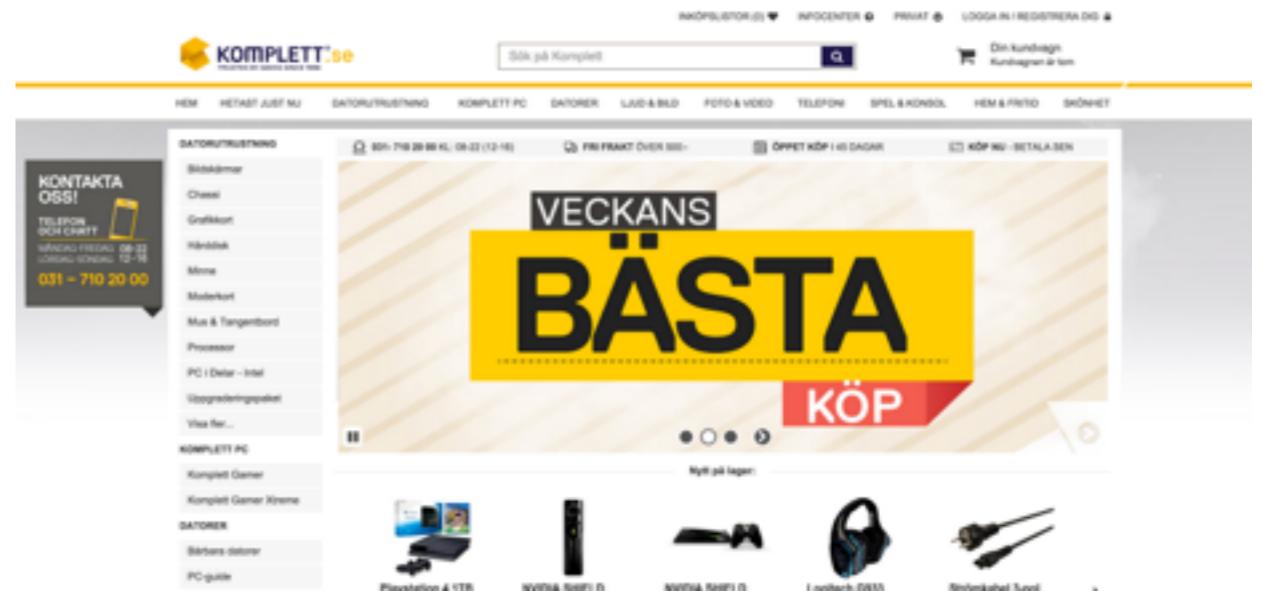
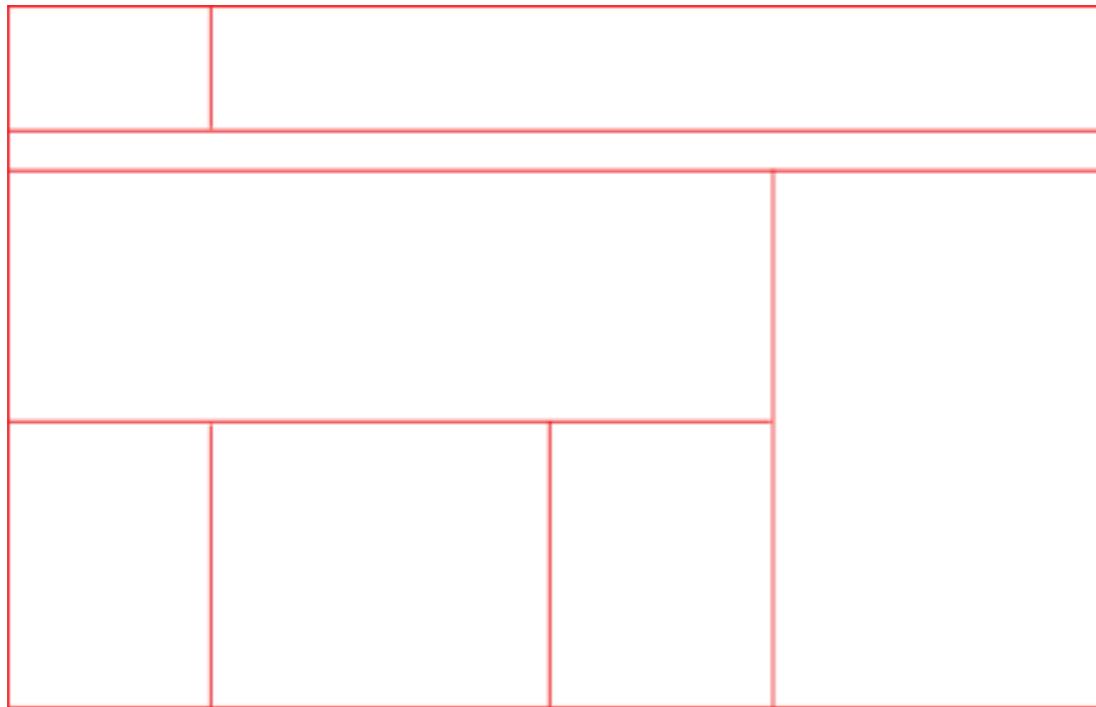


Focus Shift: Volume One  
Lee Milne

An adventurous science fiction comic that follows a unique talent as she

Flexibelt, mycket innehåll, raderna hjälper till att bilda struktur.

# Hierarchical grid



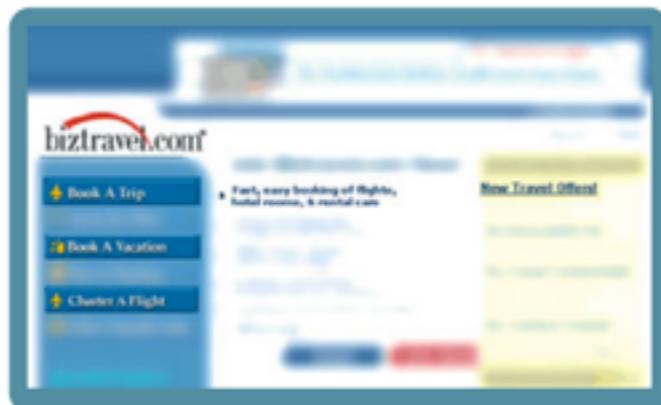
Fungerar till blandat innehåll. Skapar en struktur genom att placera ut objekt baserat på vikt.

# Text på hemsidor

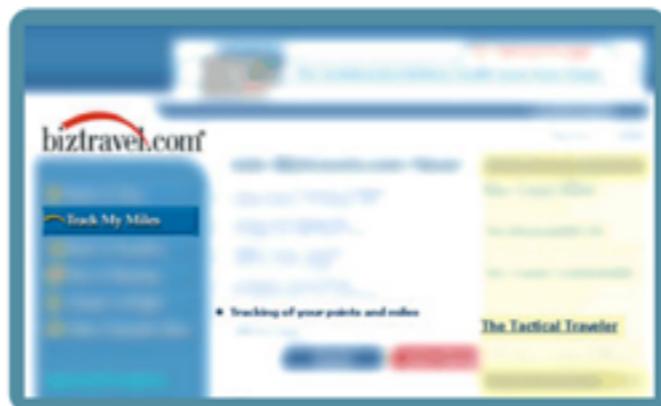
**WHAT DESIGNERS BUILD...**



**WHAT USERS SEE...**



I want to  
buy a  
ticket.



How do I  
check my  
frequent  
flyer miles?

## Användare har bråttom

Tvinga dem inte att läsa innan de är intresserade.

# Ingen påtvingad läsning

Start Sport Nöje ► TV Ledare Kultur A till Ö Q Följ/Bevaka Logga in Köp PLUS

**EXTRA**

**Nya budgethotet: 'Måste samla oss'**

► Ett nytt budgetkaos kan bli verklighet redan nästa höst efter KD-ledarens utspel

LIVE Läxar upp Åkesson med empatilektion

**LIVE-TV: Partiledardebatt i riksdagen**

► Riksdagsårets första partiledardebatt ✓ Aftonbladet bevakar live

**Rök ihop direkt – om skatterna**

**FP-ledaren: Så budgetröstar vi**

**TV AFTONBLADET**

**De störtar handlöst från mardrömsbron**

TV Skräckscenerna fångas av kameran – innan de slukas av floden

Spela i nytt fönster

Här shoppar han loss med falskt id  
Brottcentralen Fångas av övervakningskameran

**SPORTBLADET** PLUS

– Han är superettans egen Lars Lagerbäck

Lista: Utser seriens...✓ Janne A ✓ Roberto Martinez m.m

**SPORT I TV**

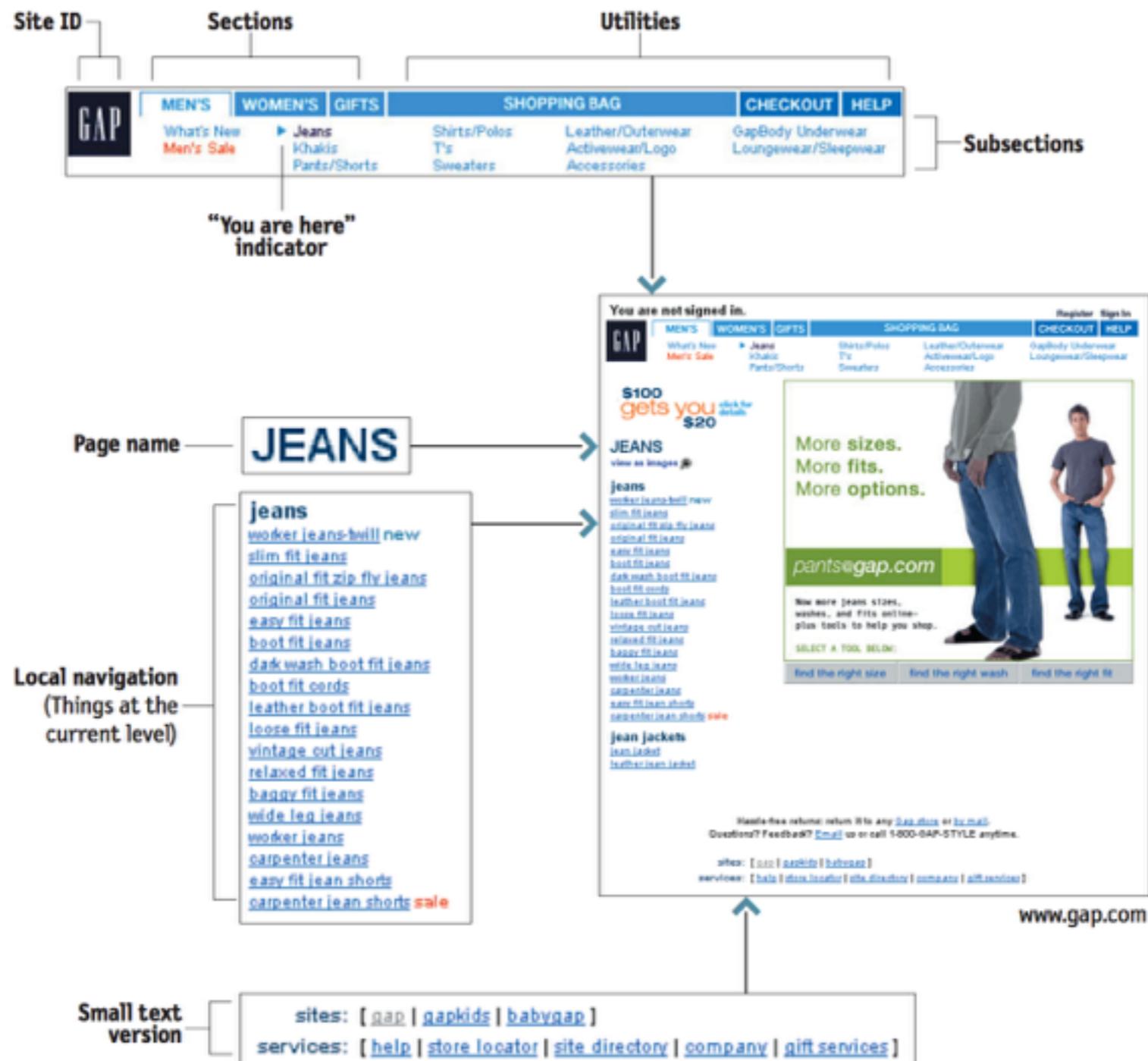
# Menyer och Navigation

- Search dominant users vs Link dominant users (Nielsen)
  - Länkar eller sökfönster?
- Besöker letar (nästan) alltid efter någonting
  - Så menyn hamnar högt i hierarkin
- Hittar användaren inte det de letar efter så lämnar de sidan

# Konventioner

- ID - Vem äger sidan?
- Inloggning, beställningar etc
- Sektioner - Vilken avdelning?
- Sidomeny - Navigera nuvarande nivå
- Sidfot - Kontakt, information etc

# Konventioner



# Konventioner

The screenshot shows the top navigation bar of the Amazon website. A red box highlights the 'Books' link in the top left, which is part of a dropdown menu labeled 'Shop by Department'. Another red box highlights the 'Hello, Sign in Your Account' link in the top right, along with other account options like 'Try Prime' and 'Wish List'. The search bar is also highlighted with a red box. Below the header, a large banner reads 'Books at Amazon'.

**Amazon Try Prime**

Books

Shop by Department

Your Amazon.com Today's Deals Gift Cards Sell on Amazon Help

Hello, Sign in Your Account Try Prime Wish List Cart

Books Advanced Search New Releases Best Sellers The New York Times® Best Sellers Children's Books Textbooks Textbook Rentals Sell Us Your Books Best Books of the Month Deals in Books

Books at Amazon

THE AMAZON EDITORS' Best Books of October > See more

KARIN SLAUGHTER PRETTY GIRLS CITY ON FIRE MR. ENGELS

Popular in Books

- ABR: Read the Amazon Editors' Books Blog
- Best Books of the Month
- Deals in Books
- From Page to Screen: Read it Before You See It
- Children's Books
- Books with Buzz
- Award Winners
- Best Books of 2014

Omnivoracious THE AMAZON BOOK REVIEW > Learn more

Best Books of the Month > Learn more

Up to 50% Off SELECT BOOKS IN LITERATURE AND FICTION > Learn more

# Konventioner

The screenshot shows the homepage of the Swedish online retailer Komplett.se. The page features a large search bar at the top right, a navigation menu with categories like HEM, DATORUTRUSTNING, and KOMPLETT PC, and a prominent yellow banner in the center advertising a weekly deal. A sidebar on the left provides contact information and links to various product categories.

**Top Navigation:**

- INKÖPSLISTOR (0) ❤️
- INFOCENTER ⓘ
- PRIVAT ⓘ
- LOGGA IN / REGISTRERA DIG ⓘ

**Header:**

- KOMPLETT.se** TRUSTED BY GEEKS SINCE 1996
- Sök på Komplett
- Din kundvagn  
Kundvagnen är tom

**Main Navigation:**

- HEM
- HETAST JUST NU
- DATORUTRUSTNING
- KOMPLETT PC
- DATORER
- LJUD & BILD
- FOTO & VIDEO
- TELEFONI
- SPEL & KONSOL
- HEM & FRITID
- SKÖNHET

**Left Sidebar (Contact and Categories):**

**KONTAKTA OSS!**

TELEFON OCH CHATT

MÅNDAG-FREDAG 08-22  
LÖRDAG-SÖNDAG 12-16

**031 - 710 20 00**

**DATORUTRUSTNING**

- Bildskärmar
- Chassi
- Grafikkort
- Hårddisk
- Minne
- Moderkort
- Mus & Tangentbord
- Processor
- PC i Delar - Intel
- Uppgraderingspaket
- Visa fler...

**KOMPLETT PC**

- Komplett Gamer
- Komplett Gamer Xtreme

**DATORER**

- Bärbara datorer
- PC-guide

**Central Banner:**

031- 710 20 00 KL: 08-22 (12-16) | FRI FRAKT ÖVER 500:- | ÖPPET KÖP I 45 DAGAR | KÖP NU - BETALA SEN

VECKANS  
**BÄSTA** KÖP

**Nytt på lager:**

- Playstation 4 1TR
- NVIDIA SHIELD
- Logitech G933
- Strömkabel 3-nol

# Konventioner

[Back to top](#)

## Get to Know Us

[Careers](#)  
[Investor Relations](#)  
[Press Releases](#)  
[Amazon and Our Planet](#)  
[Amazon in the Community](#)  
[Amazon Devices](#)

## Make Money with Us

[Sell on Amazon](#)  
[Sell Your Services on Amazon](#)  
[Sell on Amazon Business](#)  
[Sell Your Apps on Amazon](#)  
[Become an Affiliate](#)  
[Advertise Your Products](#)  
[Self-Publish with Us](#)  
[Become an Amazon Vendor](#)  
[See all](#)

## Amazon Payment Products

[Amazon.com Rewards Visa Card](#)  
[Amazon.com Store Card](#)  
[Amazon.com Corporate Credit Line](#)  
[Shop with Points](#)  
[Credit Card Marketplace](#)  
[Amazon Currency Converter](#)

## Let Us Help You

[Your Account](#)  
[Your Orders](#)  
[Shipping Rates & Policies](#)  
[Amazon Prime](#)  
[Returns & Replacements](#)  
[Manage Your Content and Devices](#)  
[Help](#)



[Australia](#) [Brazil](#) [Canada](#) [China](#) [France](#) [Germany](#) [India](#) [Italy](#) [Japan](#) [Mexico](#) [Netherlands](#) [Spain](#) [United Kingdom](#)

**6pm**  
Score deals  
on fashion brands

**AbeBooks**  
Rare Books  
& Textbooks

**ACX**  
Audiobook Publishing  
Made Easy

**AfterSchool.com**  
Kids' Sports, Outdoor  
& Dance Gear

**Alexa**  
Actionable Analytics  
for the Web

**Amazon Business**  
Everything For  
Your Business

**AmazonFresh**  
Groceries & More  
Right To Your Door

**Amazon Local**  
Great Local Deals  
in Your City

**AmazonGlobal**  
Ship Orders  
Internationally

**Amazon Home Services**  
Handpicked Pros  
Happiness Guarantee

**Amazon Web Services**  
Scalable Cloud  
Computing Services

**Audible**  
Download  
Audio Books

**BeautyBar.com**  
Prestige Beauty  
Delivered

**Book Depository**  
Books With Free  
Delivery Worldwide

**Casa.com**  
Kitchen, Storage  
& Everything Home

**ComiXology**  
Thousands of  
Digital Comics

**CreateSpace**  
Indie Print Publishing  
Made Easy

**Diapers.com**  
Everything  
But The Baby

**DPRReview**  
Digital  
Photography

**East Dane**  
Designer Men's  
Fashion

**Fabric**  
Sewing, Quilting  
& Knitting

**Goodreads**  
Book reviews  
& recommendations

**IMDb**  
Movies, TV  
& Celebrities

**Jungle.com**  
Shop Online  
in India

**Kindle Direct Publishing**  
Indie Digital Publishing  
Made Easy

**Look.com**  
Kids' Clothing  
& Shoes

**MYHABIT**  
Private Fashion  
Designer Sales

**Shopbop**  
Designer  
Fashion Brands

**Soap.com**  
Health, Beauty &  
Home Essentials

**TenMarks.com**  
Math Activities  
for Kids & Schools

**VineMarket.com**  
Everything  
to Live Life Green

**Wag.com**  
Everything  
For Your Pet

**Warehouse Deals**  
Open-Box  
Discounts

**Woot!**  
Discounts and  
Shenanigans

**Yoyo.com**  
A Happy Place  
To Shop For Toys

**Zappos**  
Shoes &  
Clothing

[Conditions of Use](#) [Privacy Notice](#) [Interest-Based Ads](#) © 1996-2015, Amazon.com, Inc. or its affiliates

[ps://www.amazon.com/books-used-books-textbooks/b/ref=nav\\_shopall\\_bo?ie=UTF8&node=283](http://www.amazon.com/books-used-books-textbooks/b/ref=nav_shopall_bo?ie=UTF8&node=283)

# Konventioner

Screenshot of the Reddit homepage (<https://www.reddit.com>) showing the front page of posts.

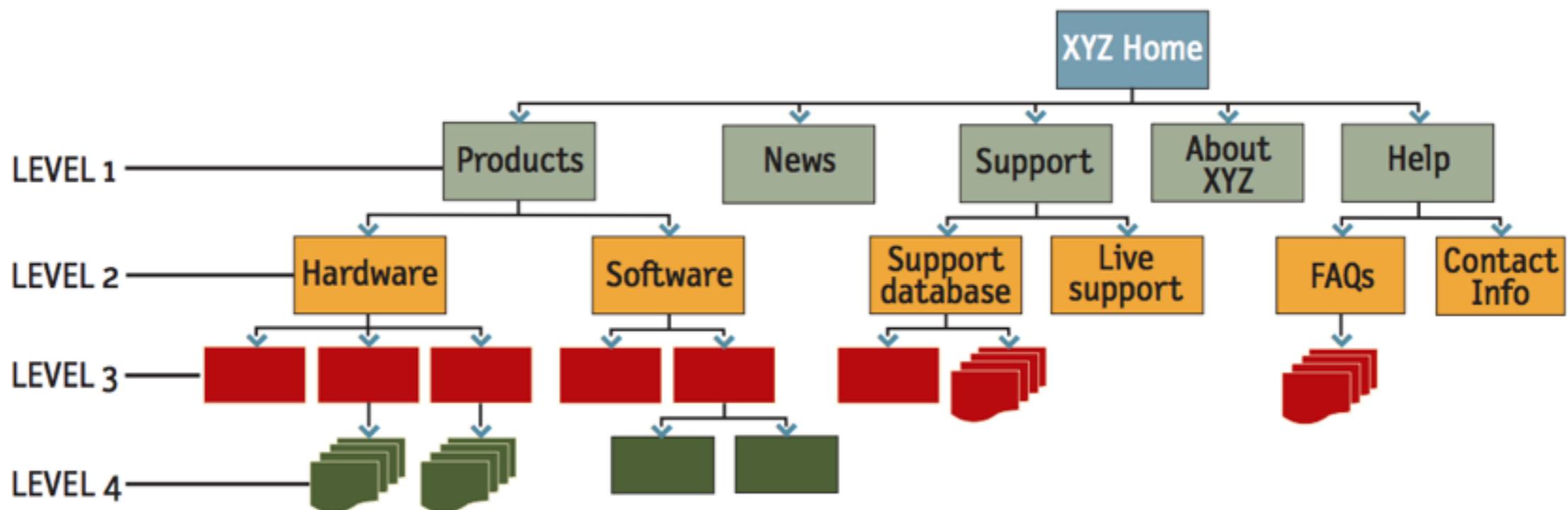
The page features a large banner at the top for "Episode 35 - Real Life First Person Shooter. David Reynolds and Shaz Abdullah discuss game of thumbs, meeting Steven Spielberg, First Person Shooter and so much more." (reddit.com) promoted by redditads.

The main content area displays a list of 9 trending posts:

- 1 6120 My wife said, "Lincoln Chafee looks like that guy from Whose Line Is It Anyway". I asked, "Which one?" Her response: "Both". (i.imgur.com)
- 2 5118 Cutest thing ever (i.imgur.com)
- 3 4025 Bernie Sanders gives Jim Webb a pat on the back (i.imgur.com)
- 4 4634 World's Most Pathetic Elevator Chime (youtube.com)
- 5 2831 This magnificent bastard lives on my street, finally posed for a picture (imgur.com)
- 6 TIL The singer of Peanut Butter Jelly Time died in an 11 hour police standoff during which time his brother-in-law Snoop Dogg attempted to calm him down and surrender (lasvegassun.com)
- 7 3575 Company that hiked drug price 5,000% now under antitrust probe (wtkr.com)
- 8 3628 Perfect Halloween Cupcakes (imgur.com)
- 9 4790 ISIS Confirms That US Killed Its Number Two Leader Syria/Iraq (israelnationalnews.com)

On the right side, there is a sidebar with a search bar, login fields, and links to "Submit a new link" and "Submit a new text post". Below these is a large advertisement for "Wow, It's RETROFUTURISM" featuring a man in a futuristic mask. A progress bar at the bottom indicates the "daily reddit gold goal" is at 6%.

# Brödsmulor och spår



# Spår

AliExpress™ ≡ I'm shopping for... All Categories 🔍 Cart 0 Wish List Sign in Join My AliExpress

Home > All Categories > Health & Beauty > Tattoo & Body Art > Tattoo Guns

 52% OFF

NEW ARRIVAL, Wholesale Price JOHNNY IRONS Tattoo Machines #MJ09-L, 24mm 22uF 10 Wraps Coils Tattoo Gun For Liner, Free Shipping

★★★★★ 100.0% of buyers enjoyed this product! (40 votes) | 49 orders

Price: US \$69.00 /piece  
Discount Price: **US \$33.12** / piece 2 days left

Shipping: Free Shipping to Sweden via China Post Registered Air Mail Estimated Delivery Time: 15-45 days (ships out within 5 business days)

Quantity: 1 piece (4 pieces available)

Total Price: **US \$33.12**

Buy Now Add to Cart

Add to Wish List (77 Adds)

Return Policy: Returns accepted if product not as described, buyer pays return shipping fee; or keep the product & agree refund with seller. [View details](#)

Seller Guarantees: On-time Delivery **45 days**

 **Buyer Protection**

**Full Refund** if you don't receive your order

**Full or Partial Refund**, if the item is not as described

[Learn More](#)

Product ID: 32308076300

share:      

Sign in and share the website for a chance to get Points, which you can then convert to coupons.

**Top-rated Seller**

**Sold By**  
**Victor Tattoo & Piercing Supplies**  
China (Mainland) (Zhejiang)  
264   
99.0% Positive feedback  
[Detailed seller ratings](#)

Visit Store

Add to My Favorite Stores (106 Adds)

**Contact Seller**  
Contact Now

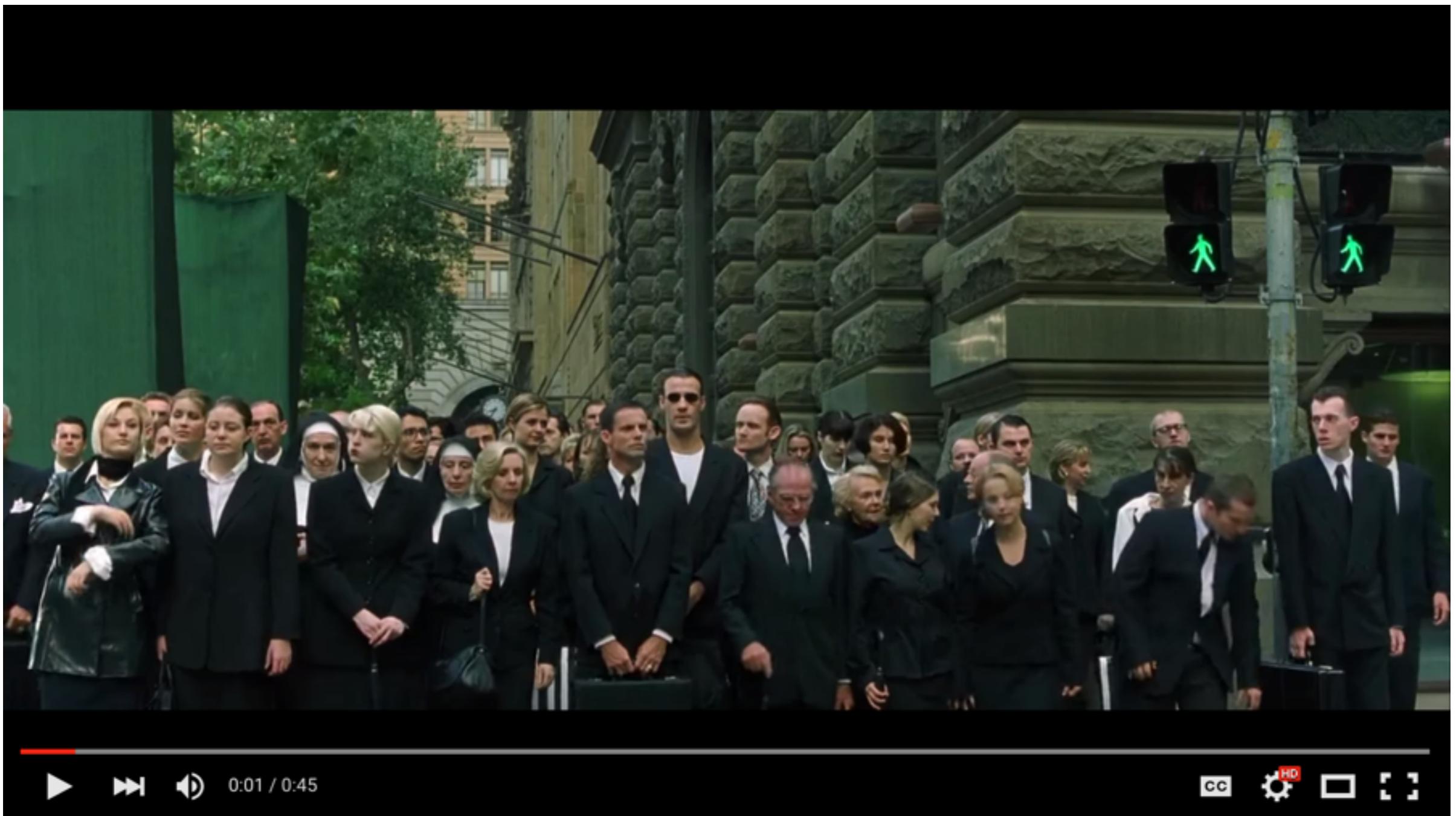
**Seller Online**  
**After-sale Services**  
 Peter

# Färger

- Tillgänglighet
- Web colours



# Kontrast



# Jacob Nielsen - useit

useit.com: useable information technology  Search

## useit.com: Jakob Nielsen's Website

### Permanent Content

**Alertbox**  
Jakob's column on Web usability  
[Intranet Users Stuck at Low Productivity](#) (December 3)  
Although intranet design is improving, it hasn't kept pace with increased complexity in enterprise requirements, so measured usability is down slightly.  
[Windows 8 – Disappointing Usability](#) (November 19)  
[Hardware Specs vs. UX](#) (November 5)  
[Mobile Email Newsletters](#) (October 22)  
[457 Alertbox columns](#) from 1995 to 2012  
Sign up for [newsletter](#) by email when a new Alertbox is published

**Reports**  
[Agile usability](#)  
[Application design showcase](#): the best App UIs  
[Intranet usability](#)

- [Intranet design annual](#)
- [Enterprise 2.0](#)
- [Intranet portals](#)
- [Design guidelines for intranets](#), vols. 1-10
- [Intranet IA](#)
- Sector-specific: financial, government, tech
- E-commerce (13 vol. series) and B2B sites

[Email newsletters](#), 5th edition [new](#)  
[Return on investment](#) for usability (ROI)  
Age groups: [Children](#), [Teens](#), [Students](#), [Seniors](#)  
Donations to non-profits  
Corporate sites: [company image](#), [PR](#), [IR](#)  
[Mobile sites](#)  
[More reports and usability guidelines](#)

**Training Video**  
[Paper prototyping](#): 40 minute how-to video (Blu-Ray & DVD)

**Books**  
[Mobile Usability](#) [new](#)  
[Eye-tracking Web Usability](#)  
[Prioritizing Web Usability](#)  
[Full list of books by Jakob Nielsen](#)  
[Recommended books](#) by other authors

**Consulting Services**  
[Nielsen Norman Group](#) offers usability [reviews](#), [training](#), [user testing](#), and a [conference](#)

**About Jakob Nielsen**  
[Biography and photos](#)  
[Papers and essays](#)

**About This Site**  
Why this site has almost [no graphics](#)  
[Copyright](#) and reprint rules

### News

**Usability Week 2013 Conference**  
- [New York City](#): March 17-22, 2013  
- [San Francisco](#): April 28-May 3, 2013  
- [London](#): May 12-17, 2013  
- [Toronto](#): June 3-7, 2013  
- [Melbourne](#): July 2013

Full-day training courses, including

- [IA\\_1 \(structure\) & IA\\_2 \(navigation\)](#)
- [Fundamental Guidelines for Web Usability](#)
- [Mobile Sites & Touchscreen Apps](#)
- [Visual Design for Mobile](#) (2-day course)
- [Apps Design 1 \(GUI\) & Apps Design 2 \(workflow\)](#)
- [Web Page Design](#)
- [Writing for the Web](#) (2 days)
- [The Human Mind: How Your Users Think](#)
- [UX Basic Training](#)

[Tweets from the conference](#)

[IEEE Spectrum](#) [Is Windows 8's Lack of Windows a Mistake?](#) (14 minute podcast, with transcription)  
[New York Times](#) [Fired Up About the Kindle Fire](#)  
[Tech Night Owl Live](#) [radio show for about Windows 8 and tablet usability](#) (audio recording)  
[BBC](#) [Micropayments: Would you pay 20p to read an article?](#)  
[Computerworld](#) [Windows 8 UI 'strategic mistake,' argues design guru](#)  
[Computerworld](#) [User interface guru: With Windows 8, Microsoft throws users "under the bus."](#)  
[PCWorld](#) [The Windows 8 UI: How do interface and usability experts rate all the changes?](#)  
[The Media Briefing](#) [Why Banner Blindness Means Display Ads Still Aren't Fit For the Web](#)  
[NPR](#) [The Remote Control: Where do We Go From Here?](#) (one hour podcast)  
[Fox News](#) [The gadgets of 2025: Frog unveils vision of the future](#)  
[TIME](#) [Do E-Books Make It Harder to Remember What You Just Read?](#)  
[BBC](#) [The Daily Mail has mastered the art of the long website headline](#)  
[New York Times](#) [As Kindle Fire Takes Heat, Remedies Are Promised](#)  
[BusinessWeek](#) [Voice Control, the End of the TV Remote?](#)  
[TabTimes](#) [User interface guru Jakob Nielsen: "Right now I think Kindle Fire is a bad bargain."](#)  
[ClickZ](#) [Usability for Mobile Sites and Apps](#)  
[uTest.com](#) [Testing the Limits](#)  
[The Independent](#) [Website redesign: Why do we get so angry when the websites we love update their look?](#)  
[Ironworks](#) [Video report from Usability Week San Francisco](#) (2:34 min. video)  
[The Guardian](#) [The art of slow reading](#) Has endlessly skimming short texts on the internet made us stupider?

# Responsive Web Design



# Responsive eller Adaptive

- Två sätt att arbeta med User Experience (UX) för att förbättra användarupplevelsen över olika plattformar.
- Båda metoderna handlar om att optimera för olika plattformar, skärmar, användarkontext eller inputs.

# Responsive

- Responsive design works on the principle of flexibility - a single fluid website that can look good on any device. Responsive websites use media queries, flexible grids, and responsive images to create a user experience that flexes and changes based on a multitude of factors.

# Adaptive

- Adaptive design innebär att det istället för en flexibel design detektera vilken typ av apparat som används och baserat på det ändra layout och funktioner.
- Exempelvis genom specifika mobilhemsidor.

# Desktop

https://en.wikipedia.org/wiki/Main\_Page

Create account Not logged in Talk Contributions Log in

## Welcome to Wikipedia,

the free encyclopedia that anyone can edit.

4,985,921 articles in English

### From today's featured article

 Hastings railway station

The [Hastings Line](#) is a secondary railway line in Kent and East Sussex, England, linking [Hastings](#) with the main town of [Tunbridge Wells](#), and from there into [London](#) via Tonbridge and [Sevenoaks](#). Although the line primarily carries passengers, a gypsum mine served by the railway is a source of freight traffic. Passenger trains on the line are operated by [Southeastern](#). The railway was built by the [South Eastern Railway](#) in the early 1850s across the difficult terrain of the High Weald. Supervision was lax, and contractors skimped on the lining of the [tunnels](#), causing deficiencies that showed up after the railway had opened. Rectifications included a restricted [loading gauge](#) along the line, requiring the use of specially made [rolling stock](#). Served by [steam locomotives](#) from the time of opening until the late 1950s, passenger services were then taken over by a fleet of [diesel-electric multiple units](#) built to the line's loading gauge. Freight was handled by [diesel locomotives](#), also built to fit the loading gauge. The diesel-electric units were in service until 1986, when the line was electrified and the most severely affected tunnels were [singled](#). ([Full article...](#))

Recently featured: [Charles Domery](#) · [Silky sifaka](#) · [U.S. Route 41 Business \(Marquette, Michigan\)](#)  
[Archive](#) · [By email](#) · [More featured articles...](#)

### Did you know...

- ... that [E. E. Holman](#)'s gender was deliberately disguised to secure architectural contracts, like those for the [National Park Seminary's Aloha Dormitory](#) (pictured)?
- ... that the [scaly-throated](#), the [black-tailed](#), and the [short-billed leaftossers](#) flick aside dead leaves as they forage for small invertebrates?
- ... that [Wendy Tan White](#), the [CEO of Moonfruit](#), laid off her co-founder and future husband to save the company after the [dot-com crash](#)?
- ... that a letter by the Quaker minister [Abiah Darby](#) is used to determine the start of

 E. E. Holman

### In the news

- Alexander Lukashenko (pictured) is [re-elected President of Belarus](#) for a fifth term.
- At least 105 people are killed and more than 400 others injured in [twin bombings](#) at a peace rally in [Ankara](#), Turkey.
- The [Tunisian National Dialogue Quartet](#) is awarded the [Nobel Peace Prize](#).
- [Svetlana Alexievich](#) is awarded the [Nobel Prize in Literature](#).
- [Tomas Lindahl](#), [Paul Modrich](#) and [Aziz Sancar](#) are awarded the [Nobel Prize in Chemistry](#) for their work in the field of DNA repair.

 Alexander Lukashenko

Ongoing events: Russian military intervention in Syria · Southeast Asian haze · European migrant crisis

Recent deaths: [Richard F. Heck](#) · [Geoffrey Howe](#) · [Paul Prudhomme](#)

### On this day...

October 13

- 54 – [Claudius](#), the first Roman emperor to be born outside Italy, died mysteriously, most likely by poison administered by his wife [Agrippina](#).
- 1307 – Agents of King [Philip IV of France](#) launched a dawn raid, simultaneously arresting many members of the [Knights Templar](#), and subsequently torturing them into "admitting" heresy.
- 1885 – The [Georgia Institute of Technology](#) was established in [Atlanta](#) as part of [Reconstruction](#) plans to build an industrial economy in the post-Civil War

 Paddington Bear

# Mobil

https://en.m.wikipedia.org/wiki/Main\_Page

Search Wikipedia

## Today's featured article

 Hastings railway station

The [Hastings Line](#) is a secondary railway line in [Kent](#) and [East Sussex](#), England, linking [Hastings](#) with the main town of [Tunbridge Wells](#), and from there into [London](#) via [Tonbridge](#) and [Sevenoaks](#). Although the line primarily carries passengers, a [gypsum](#) mine served by the railway is a source of freight traffic. Passenger trains on the line are operated by [Southeastern](#). The railway was built by the [South Eastern Railway](#) in the early 1850s across the difficult terrain of the [High Weald](#). Supervision was lax, and contractors skimped on the lining of the [tunnels](#), causing deficiencies that showed up after the railway had opened. Rectifications included a restricted [loading gauge](#) along the line, requiring the use of specially made [rolling stock](#). Served by [steam locomotives](#) from the time of opening until the late 1950s, passenger services were then taken over by a fleet of [diesel-electric multiple units](#) built to the line's loading gauge. Freight was handled by [diesel locomotives](#), also built to fit the loading gauge. The diesel-electric units were in service until 1986, when the line was electrified and the most severely affected tunnels were [singled](#). ([Full article...](#))

Recently featured: [Charles Domery](#) · [Silky sifaka](#) · [U.S. Route 41 Business \(Marquette, Michigan\)](#)

[Archive](#) · [By email](#) · [More featured articles...](#)

## In the news

- Alexander Lukashenko (pictured) is [re-elected](#) President of Belarus for a fifth term.
- At least 105 people are killed and more than 400 others injured in [twin bombings](#) at a peace rally in [Ankara](#), Turkey.
- The [Tunisian National Dialogue Quartet](#) is awarded the [Nobel Peace Prize](#).
- [Svetlana Alexievich](#) is awarded the [Nobel Prize in Literature](#).
- [Tomas Lindahl](#), [Paul Modrich](#) and [Aziz Sancar](#) are awarded the [Nobel Prize in Chemistry](#) for their work in the field of [DNA repair](#).

 Alexander Lukashenko

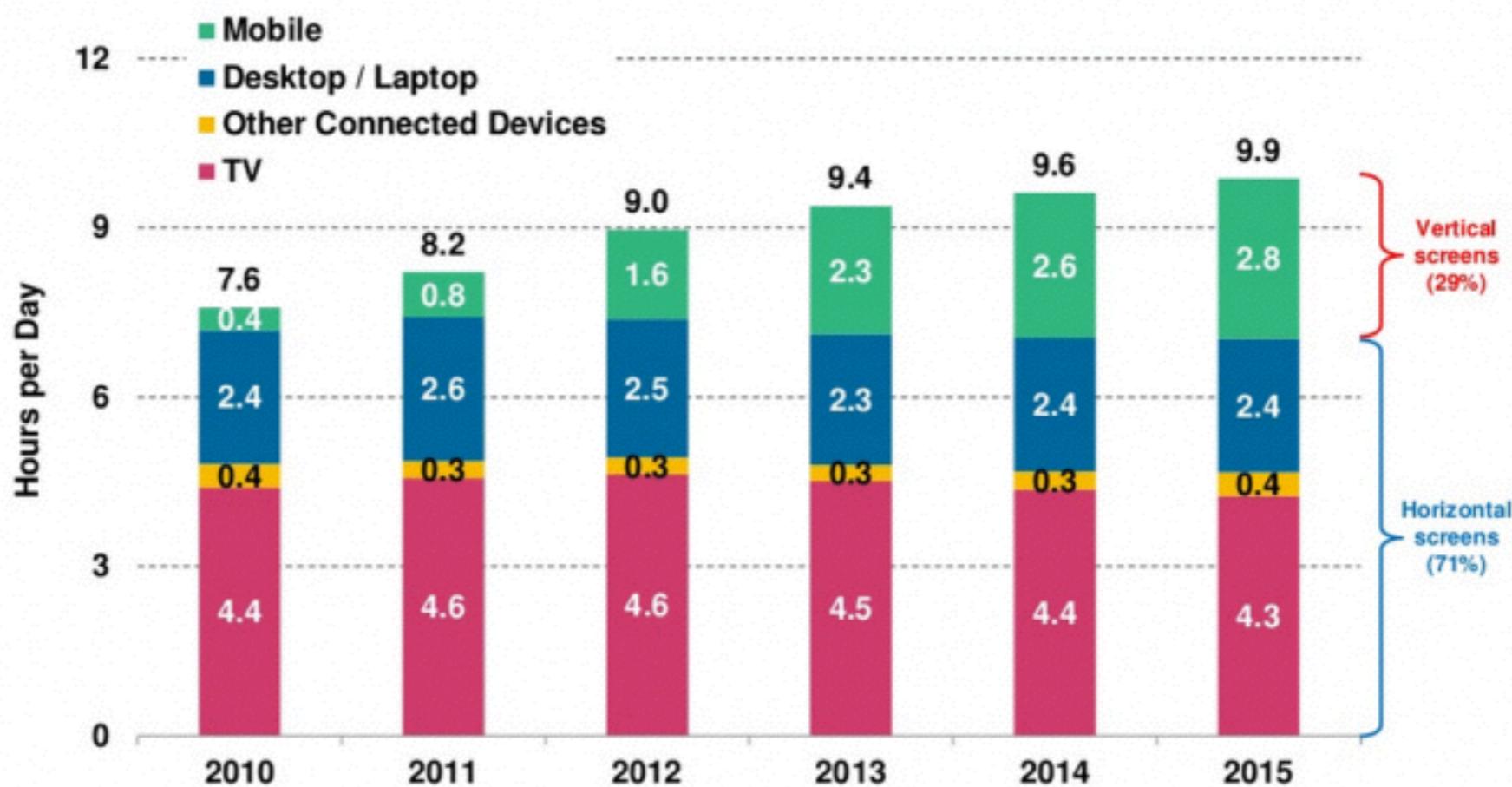
[Ongoing events:](#) [Russian military intervention in Syria](#) · [Southeast Asian haze](#) · [European migrant crisis](#)

# Mobile First

- 25% av de som använder internet i USA använder endast mobila enheter.
- ~1.2 miljarder mobilanvändare i hela världen.

# Mobile First

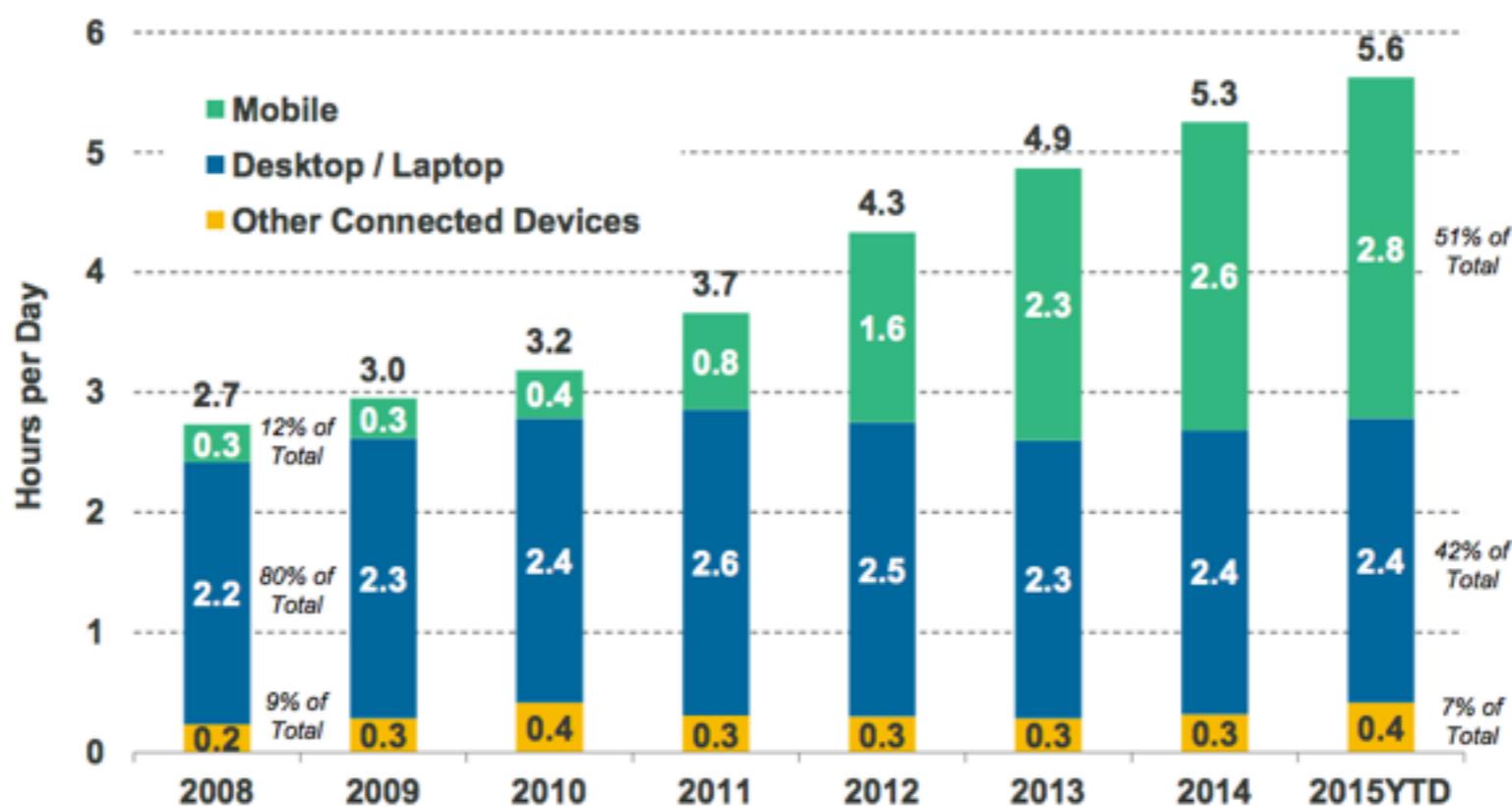
Time Spent on Screens by Orientation (Hours / Day), USA, 2010 – 2015



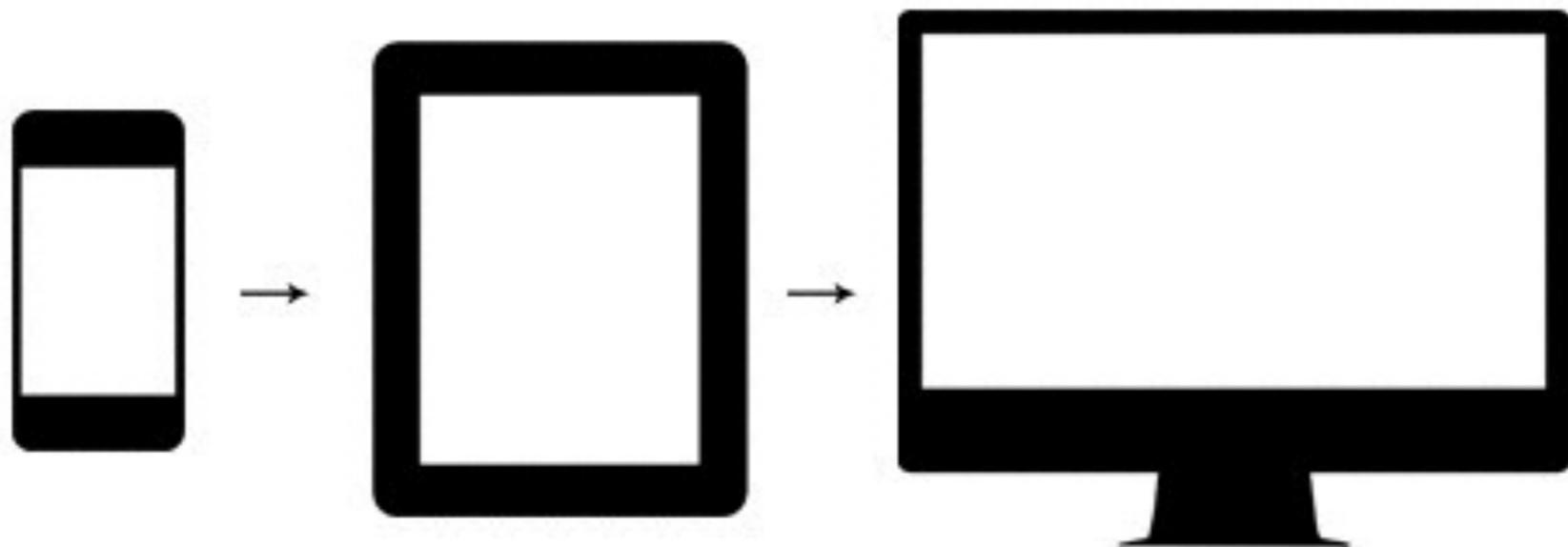
# Mobile First

Internet Usage (Engagement) Growth Solid  
+11% Y/Y = Mobile @ 3 Hours / Day per User vs. <1 Five Years Ago, USA

Time Spent per Adult User per Day with Digital Media, USA,  
2008 – 2015YTD



# Scaling Up vs Scaling Down



# Mobile First

- Bandbredd och hastighet är ett vanligt problem på mobiltelefoner, Mobile First innebär att det är optimerat för små skärmar.
- Responsive Design börjar ofta med desktop och sedan krymper för att passa en mindre skärm.

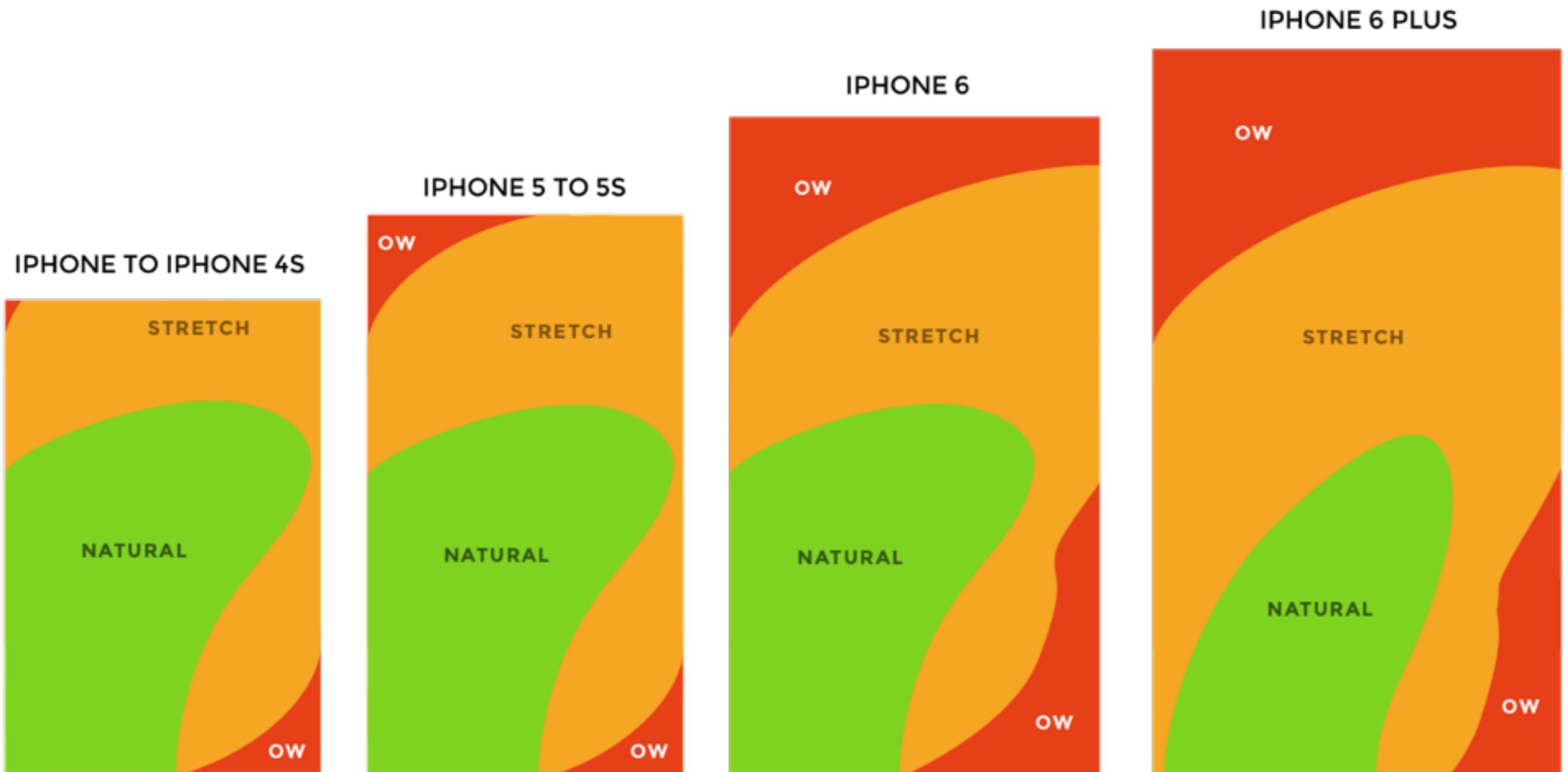
# Mobil eller Desktop interaktion?

- Peka och klicka vs swipe och peka
- Flera sidor vs scrolling
- Fast plats vs i rörelse
- Tillgång till gyro, kompass, gps, värmesensor, etc.

# Mobil eller Desktop interaktion?

	Mouse	Fingers
Precision	High	Low
Number of points specified	1	usually 1 2–3 with multi-touch
Number of controls	3: left/right button, scroll wheel	1
Homing time?	Yes	No
Signal states	Hover, mouse-down, mouse-up	Finger-down, finger-up
Accelerated movements	Yes	No
Suitable for use with big desktop monitors (30-inch or more)	Yes, because of acceleration	No: arm fatigue
Visible pointer/cursor	Yes	No
Obscures view of screen	No, thus allowing for continuous visual feedback	Yes
Suitable for mobile	No	Yes: nothing extra to carry around
Ease of learning	Fairly easy	Virtually no learning time
Direct engagement with screen and "fun" to use	No: an indirect pointing device	Yes
Accessibility support	Yes	No

# Screen interactions



# Existerande hemsidor

- Dagens Nyheter
- Amazon
- Reddit

# Desktop

https://www.reddit.com

MY SUBREDDITS ▾ FRONT - ALL - RANDOM | GADGETS - SPORTS - GAMING - PICS - WORLDNEWS - VIDEOS - ASKREDDIT - AWW - MUSIC - FUNNY - NEWS - MOVIES - BOOKS - EUROPE - HISTORY - FOOD - PHILOSOPHY - TELEVISION - JOKES - ART - DIY - SPACE - DOCUMENTARIES - FITNESS - ASKSCIENCE - NOTTHON | MORE ▾

Want to join? Log in or sign up in seconds. | English

Reddit hot new rising controversial top gilded wiki promoted

using the default subreddits for your location (SE) (use global defaults | dismiss this message)

Episode 35 - Real Life First Person Shooter. David Reynolds and Shaz Abdullah discuss game of thumbs, meeting Steven Spielberg, First Person Shooter and so much more. (reddit.com)

promoted by redditads

48 comments share pocket

search

username password

remember me  login

↑ ↓ sponsored link what's this?

1 6120 My wife said, "Lincoln Chafee looks like that guy from Whose Line is it Anyway". I asked, "Which one?" Her response: "Both". (i.imgur.com)

submitted 5 hours ago by metabyt-es to /r/funny

483 comments share pocket

Submit a new link

2 5118 Cutest thing ever (i.imgur.com)

submitted 5 hours ago by ortodoxxx to /r/aww

410 comments share pocket

Submit a new text post

3 4025 Bernie Sanders gives Jim Webb a pat on the back (i.imgur.com)

submitted 7 hours ago by CANT\_TRUST\_HILLARY to /r/gifs

752 comments share pocket

4 4634 World's Most Pathetic Elevator Chime (youtube.com)

submitted 8 hours ago by LSD\_freakout to /r/videos

473 comments share pocket

5 2831 This magnificent bastard lives on my street, finally posed for a picture (imgur.com)

submitted 6 hours ago by Lugozi to /r/pics

87 comments share pocket

6 TIL The singer of Peanut Butter Jelly Time died in an 11 hour police standoff during which time his brother-in-law Snoop Dogg attempted to calm him down and surrender (lasvegassun.com)

submitted an hour ago by OnenutFellow to /r/todayilearned

113 comments share pocket

7 3575 Company that hiked drug price 5,000% now under antitrust probe (wtkr.com)

submitted 8 hours ago by coupdetaco to /r/news

242 comments share pocket

8 3628 Perfect Halloween Cupcakes (imgur.com)

submitted 9 hours ago by Handicrafter to /r/food

297 comments share pocket

9 4790 ISIS Confirms That US Killed Its Number Two Leader Syria/Iraq (israelnationalnews.com)

submitted 11 hours ago by Nicheslovespecies to /r/worldnews

1134 comments share pocket

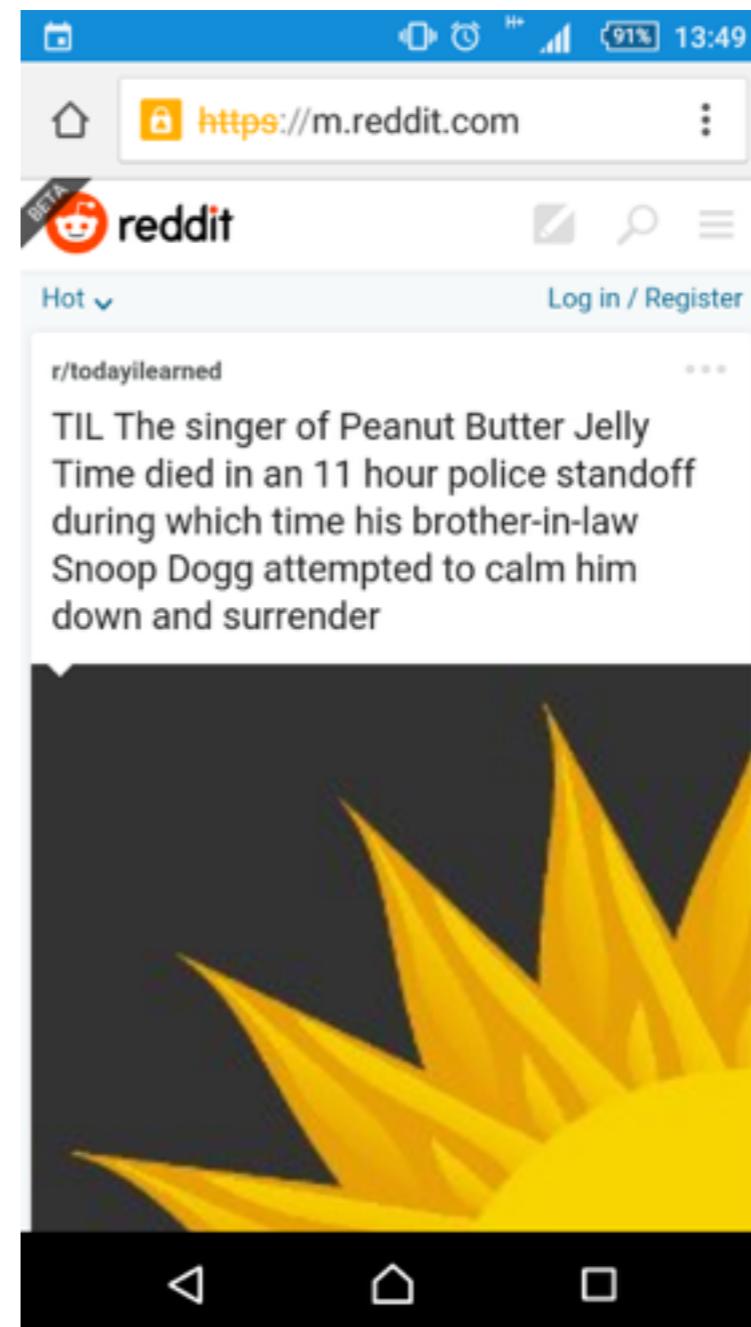
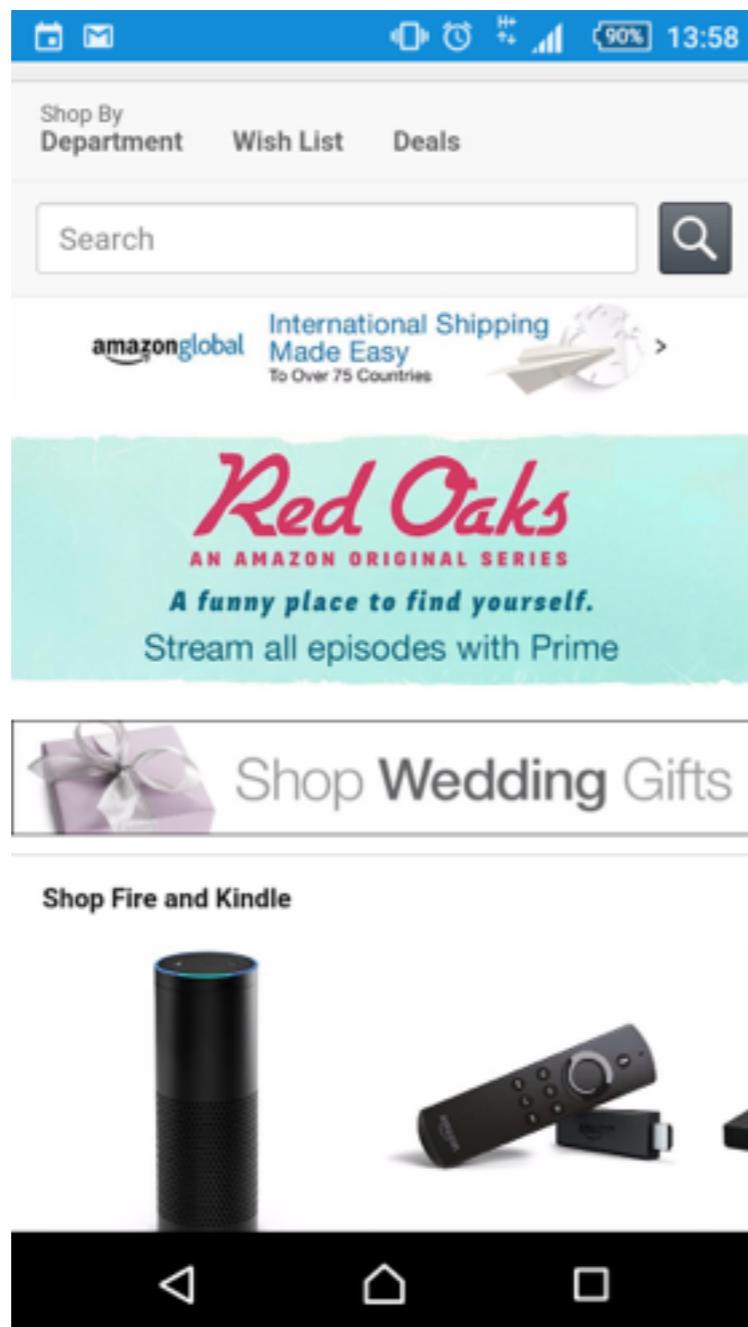
discuss this ad on reddit

daily reddit gold goal 6%

help support reddit



# Skala ner



# Börja med mobilen

- Instagram
- Waze
- Snapchat
- Flipboard

# Börja med responsive

- Flexbox
- Wordpress - Themes