Information Architecture and Persuasive Design: Improving Retrieval with Persuasive Strategies

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Agenda

- Motivation for using persuasive design

- Persuasive design (PD)

- Information architecture (IA)

- Potential of persuasive design in information retrieval

Motivation

- Web searchers are impatient, power-browsers with short time for retrieval

- Web searchers make on average 2 interactions per session and use 2 search terms per query

- Web searchers seldom utilize IA structures and search features

- Web searchers look on average at less than 2 pages of search results

- Work place searchers have multidimensional information needs fulfilling numerous search facets: product, target group, genre

- Searching aids are still needed

Persuasive design

- Persuasive design is a new, fast-growing area of research and development

- The aim of persuasive design is to change people's attitudes and behaviors

- Persuasive design consists of a set of concepts and strategies

- Persuasive design builds on interactivity between system and user

- Persuasive design has primarily been used to quit smoking, exercise more, manage a disease, take care of environment, buy goods

Information architecture

- Information architecture is the structural design that provides access to information content of web sites, intranets, portals and online communities

- Information architecture consists of 4 main components:

  - Organization system

  - Label system

  - Navigation system

  - Search system

Can persuasive design improve users' ability to exploit IA structures?

Directgov
Public services all in one place

Cymraeg | Accessibility | Help | Site index | A A **A**

Search this site [_____] Go ➔

Home | Contacts | Do it online | Newsroom

Tuesday, November 23, 2010

🏛 HM Government

Motoring made easy

A wide range of services that can save the motorist both time and money is available online

▸ Motoring services, tools and forms

Back to work

Find your way back to work ➔

Find help with job seeking and new skills

▸ Help get back to work

Winter driving

Get your car ready for the winter

▸ Winter driving

Jobseeker's Allowance

Jobseeker's Allowance
Claim online

If you need to apply

Straight to...

Motoring
Car tax, Learners, Driving licence...

Education and learning
Student loans, University, EMA...

Money, tax and benefits
Benefits, Taxes, Benefits adviser...

Home and community
Housing, Council Tax, Flooding...

Travel and transport
Journey planner, Passports...

Caring for someone
Carer's Allowance, Support services...

Environment and greener living
Saving energy, Recycling, Pollution...

Government, citizens and rights
Voting, Honours, Births, Deaths...

Parents
Having a baby, Schools, Childcare...

Employment
Jobs, Redundancy, Holidays, Pay...

Young people
Money, Work and careers, Leisure...

Disabled people
Financial support, Housing, Rights...

Pensions and retirement planning
State Pension, Planning for retirement...

Crime and justice
Types of crime, Victims, Prevention...

Health and well-being
Heathy living, Health services, A to Z...

Britons living abroad
Before you go, Study and jobs abroad...

Social housing - allocation, tenancy and rent reforms

Plans are announced to give local councils greater freedom in how

Prime Minister launches Big Society Awards

BIG SOCIETY AWARDS

The Prime Minister has launched a new award that will

Follow Directgov

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Local services

Find local council services for England

Choose a service

Find school term dates ▾

Home | Contacts | Do it online | Newsroom

Browse by subject

▸ Crime and justice

▸ Education and learning

▸ Employment

▸ **Environment and greener living**

▸ Government, citizens and rights

▸ Health and well-being

▸ Home and community

▸ Money, tax and benefits

▸ Motoring

▸ Pensions and retirement planning

▸ Travel and transport

Browse by people

▸ Young people

▸ Britons living abroad

▸ Caring for someone

▸ Disabled people

▸ Parents

Environment and greener living

Environment and greener living

Greener living - where to start

Confused about living a greener life? Our quick guides tell you what you need to know in just two minutes

▸ Greener living: a quick guide

▸ Being greener at home: a quick guide

▸ Recycling and reducing waste

▸ Recycling at home

▸ Recycling batteries

▸ Waste and recycling: a quick guide

▸ More on recycling and reducing waste

▸ Energy saving and generation

▸ Saving energy at home

▸ Generating and using greener energy

▸ Energy grants

▸ Greener travel and leisure

▸ Greener cars and driving

▸ Air travel and greener holidays

▸ Enjoying the countryside

▸ Greener community and work

▸ Ways to be greener in your community

▸ Employees: ways to be greener

▸ Eco-towns: ways to be greener

▸ Climate change and protecting the environment

▸ Climate change

▸ Protecting the environment

▸ Protecting wildlife

▸ Pollution

▸ Greener home and garden

▸ Home and shopping

▸ Greener gardening

▸ Greener labels and claims

▸ Smallholders: keeping farm animals and bees

▸ Keeping pigs: a beginner's guide

▸ Keeping chickens: a beginner's guide

▸ Keeping bees

▸ Greener life events and celebrations

▸ Greener weddings

▸ Greener funerals

▸ Moving home: a green guide

▸ More on greener life events and celebrations

⊛ See also...

▸ Planning and building regulations (home and community section)

▸ Pest control (home and community section)

▸ Bins and waste collection (home and community section)

▸ Greener living for businesses: Business Link ⧉

Online home energy check

SAVE YOUR 20%

Get a personalised report on how you can save up to £300 a year and help tackle climate change

▸ Energy Saving Trust - online home energy check ⧉

Calculate your carbon footprint!

ACT ON CO2 Calculator

Try the ACT ON CO2 calculator and find out how you can help tackle climate change

▸ Calculate your carbon footprint ⧉

Useful contacts

▸ Environment and Greener Living contacts

Green news

▸ £2 million in new funding to train and equip flood rescue teams

▸ Maximise your mobile coverage - new Ofcom guide

▸ Awards show progress with greener homes

▸ Green Deal to offer

Gifts   New Arrivals   **Women's Bags**   Men's Bags   Purses & Wallets   Work & Travel   Accessories   Shoes   Womenswear   Coming Soon   Search

Shoulder Bags

Cross Body Bags

Tote Bags

Clutch Bags

Holdalls

🔍 Magnify

Simple Clipper

Black-Cognac Scotchgrain

500 €

Features	Details	Size & Fit

Nothing says 'classic Mulberry' like our new Scotchgrain luggage collection. Its beautifully textured surface is accented by smooth leather trim in a contrast colour. Travel pieces should be built to last, and look good while doing it. A timeless travel bag in a small size, this clipper has two short handles and a detachable shoulder   ∨

✚ Add to Basket

▐ Send to a Friend   ★ Add to Wishlist

Holdalls	Recently Viewed Items

More Views   More Styles   **We Suggest**
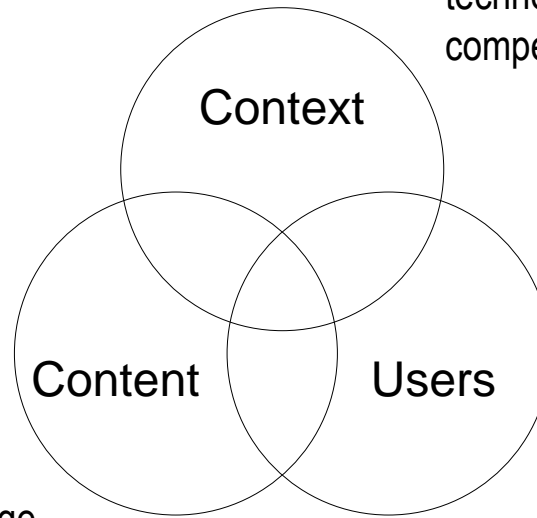
We also suggest...   8 Card Holder

IA system development

Methods for data collection: e.g. interview, workshops, questionnaires, content analysis, log files

Mission, information behavior, policies, culture, technology, resources (time, economy, competences)

Context

Content

Users

Content types, number, genre, usage, relation to work tasks

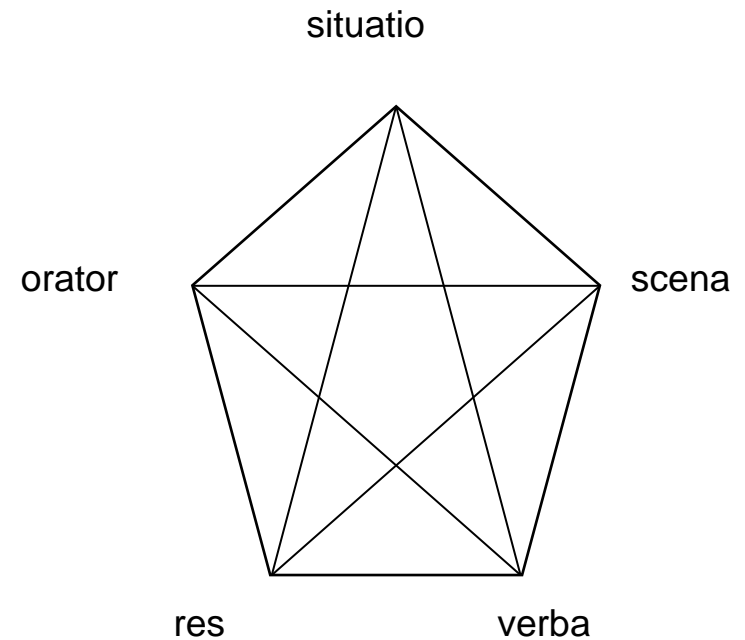Target groups, information behavior, work tasks, search tasks, discourses, terminology

(Rosenfeld & Morville, 2007)

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Rhetorical pentagon

Situatio	Context
Res	Content
Scena	Audience
Verba	Form
Orator	Sender

(Hasle, 2006)

Persuasive design strategies

Tailoring	Customizing actions or information to user needs and characteristics
Reduction	Making actions or information a simple as possible
Tunneling	Leading users through a predetermined sequence of actions or events
Suggestions	Suggesting a certain action or behaviour at the most opportune moment (Kairos)
Self-monitoring	Monitoring behaviour in order to modify actions or behaviour to achieve a predetermined goal or outcome
Surveillance	Monitoring the behaviour of another to modify behaviour in a specific way
Conditioning	Shaping behaviour by rewarding a certain behaviour

Persuasive design strategies

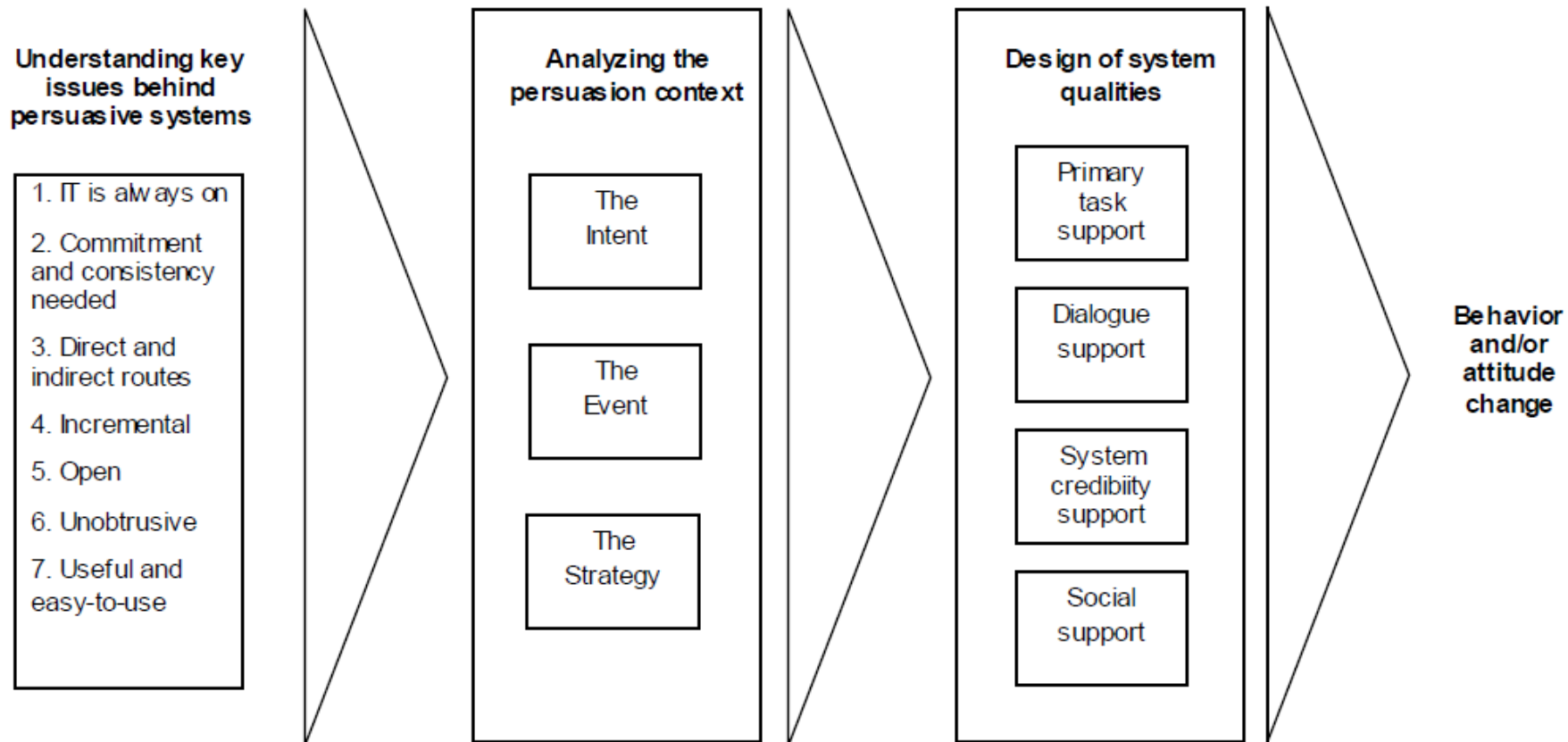| Macrosuasion	Microsuasion
The product has persuasion and motivation as the overall intent and sole purpose	The product so not have an overall intent to persuade, but incorporate smaller persuasive elements to achieve a different goal

(Fogg, 2003)

Case study

- **Case study** of Startvækst (Start growth) containing articles, tools, templates, guides, law info, news, cases, advisers for entrepreneurs and business owners

- **Focus on query formulation**

  - Searching

  - Browsing

- **Analytical framework**

  - Information architecture components (Morville & Rosenfeld, 2007)

  - Persuasive design strategies (Fogg, 2003)

  - PSD model (Oinas-Kukkunen & Harjumaa, 2009)

Phases in persuasive systems development

Understanding key issues behind persuasive systems

1. IT is always on
2. Commitment and consistency needed
3. Direct and indirect routes
4. Incremental
5. Open
6. Unobtrusive
7. Useful and easy-to-use

Analyzing the persuasion context

The Intent

The Event

The Strategy

Design of system qualities

Primary task support

Dialogue support

System credibiity support

Social support

Behavior and/or attitude change

Google | startvækst

Filer   Rediger   Vis   Favoritter   Funktioner   Hjælp

Google | startvækst | Search | Bookmarks | Translate | AutoFill | startvækst

Information og vejledning til iværksættere og virksom...

Side   Funktioner

Google™   This page is in Danish.   Translate it using Google Toolbar?   Learn more   [Translate]

STARTVÆKST

Søg   »

Vælg region

🔒 Log ind

STARTVÆKST

Startvækst er stedet for viden og værktøj til iværksættere og virksomheder i vækst.

Fra Startvækst kan du finde vej til Væksthusene som tilbyder målrettet vejledning til iværksættere og virksomheder, der har ambitiøse planer om fx at opdyrke nye markeder, opfinde nye produkter eller ansætte flere medarbejdere.

Iværksætter

> Start en ny virksomhed
> Overtag en virksomhed
> Finansiering af din virksomhed
> Det administrative
> Lovkrav ved opstart
> Markedsføring
> Salg
> Franchise
> Import

Om iværksætter

Har du fået ideen om at starte egen virksomhed, er der sikkert mange spørgsmål du ønsker svar på. Vi har samlet svarene til dig under området *Start en ny virksomhed*.

Under *Overtag en virksomhed* kan du få information om, hvad du skal være opmærksom på før, under og efter købet af en eksisterende virksomhed.

Området *Det Administrative* giver dig gode råd og viden om, hvordan og hvor meget du skal betale i skat og moms. Du kan også læse om, hvilke udgifter der udløser fradrag.

Iværksætter ⊙   **Virksomhed** ⊙   **Virksomhed i vækst** ⊙

Få vejledning i dit Væksthus - vælg region

Find dit væksthus

Om Væksthusene

Vælg din region i kortet til venstre for at komme til Væksthusets hjemmeside.
Din genvej til netværk, viden og vækst.

Du kan også ringe på tlf.: 70 15 16 18 og blive henvist til dit Væksthus.

Værktøj på Startvækst

Min Vækstprofil
Kender du virksomhedens stærke og svage sider? Hent indsigt og inspiration.
Gå til Min Vækstprofil

Innovationstesten
Tag testen, og få værdifuld viden om din virksomheds innovationsevner.
Gå til Innovationstesten

Spørg Eksperten
Eksperter sidder klar online til at svare på dine spørgsmål.
Gå til Spørg Eksperten

Værktøj på Startvækst
På Startvækst finder du mange forskellige værktøjer.

MAXIMER Dit Potentiale

POWER

I uge 47 er der events, springboards, workshops, foredrag og konkret rådgivning, hvor danske og udenlandske eksperter stiller deres viden til

Persuasive design in IA

Principle of Reduction: making actions or information as simple as possible

- **Browsing**

  - Integrated display of multiple information types, e.g. articles, news, advisers, events, templates, tools, cases, etc.

- **Searching**

  - Query expansion, e.g. bridging layman language and expert language

Forside | Min Side | Post

Søg

Borger.dk > Familie og børn

Familie og børn

Print Permanent link

Graviditet og fødsel
(Sundhed og sygdom)

Børn

Adoption

Parforhold og ægteskab

Orlov

Skilsmisse

Navne og navneændring

Skole og uddannelse
(Skole og uddannelse)

Brug for råd og hjælp

Økonomi i familien
(Økonomi, skat, SU)

Nyheder på dette område

15.11.2010
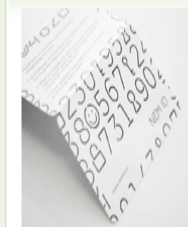Indvandringsprøve træder i kraft 15. november

Læs flere nyheder

Se film om NemID

Hvad er NemID? Hvordan får du fat i det, og hvad kan det bruges til? De spørgsmål kan du få svar på i de små film om NemID.

Film om NemID

STARTVÆKST

Iværksætter

Start en ny virksomhed
  Den gode idé
  Personlige overvejelser
  Praktiske overvejelser
  Forretningsplan
> Overtag en virksomhed
> Finansiering af din virksomhed
> Det administrative
> Lovkrav ved opstart
> Markedsføring
> Salg
> Franchise
> Import

Virksomhed

Virksomhed i vækst

Værktøjer

Start en ny virksomhed

Nu hvor du har fået ideen om at starte egen virksomhed, er der sikkert mange spørgsmål du ønsker svar på. Vi har samlet svarene til dig, men først er der 3 ting du bør tænke på, hvis du overvejer at starte egen virksomhed.

- **Er din idé bæredygtig?**
  Det er relativt nemt at få en god idé, men straks noget sværere at iværksætte den og tjene penge på det. Inden du går i gang, må du undersøge der er et behov for dit produkt eller din ydelse og om det adskiller sig fra lignende produkter på markedet.

- **Er du klar til at blive iværksætter?**
  Det kræver lidt ekstra af dig,som iværksætter, at starte egen virksomhed. En arbejdsuge på 60-80 timer er ikke ualmindelig i starten, ligesom der kan være perioder hvor din indtjening er lavere end du er vant til. Personlighedsmæssigt er den typiske iværksætter bl.a. risikovillig, selvsikker og udholdende.

- **Hvilken form for virksomhed vil du drive?**
  Som ny virksomhedsejer er der også en del praktiske forhold du skal tage stilling til, bl.a. hvilken virksomhedstype der passer bedst til dig og dit produkt (og din økonomi) . Virksomhedstypen har bl.a. betydning for de skattemæssige forhold og kravene til regnskab Valget af virksomhedstype afhænger hvilken økonomisk risiko du er villig til at løbe, og hvor stor en kapital du har til rådighed.

Værktøjer

> Forretningsplan
Vælg mellem forskellige værktøjer til din forretningsplan og få en præcis beskrivelse af din virksomhed, dens idé og målsætninger.

> Startblanket på Virk.dk
Start en enkeltmandsvirksomhed eller et I/S med denne blanket, og få et CVR-nr.

> Vis alle

Nyhedsbrev
Tilmeld dig nyhedsbrevet og få mere at vide om hvad der sker i dit væksthus.

> Tilmeld dig nyhedsbrevet her

Brugerne anbefaler
> Den gode idé
> Virksomhedsformer
> Drop undskyldningerne
> Personlige overvejelser
> Forretningsplan

Mest læste
> Den gode idé
> Forretningsplan
> Brug dit netværk
> Drop undskyldningerne
> Personlige overvejelser

Persuasive design in IA

Principle of Tunnelling: Leading users through a predetermined sequence of actions or events

- **Browsing**

  - *Sale tunnel* going through steps in sale and display: content from different part of site, related topics, information types, external web sites

- **Searching**

  - *Ideal search tunnel* for selected search tasks: searches related to specific work tasks, recall-oriented searches, precision-oriented searches

Boligejer.dk

ERHVERVS- OG BYGGESTYRELSEN

Om Boligejer.dk
Sitemap
Hjælp
Log ind →   English

Emner | Temaer | **Guider** | Værktøjer | Dokumenter | Lovgivning | Søg →

Bolighandel

→ **Boligkøb**

→ Forbered købet
→ Undersøg boligen
→ Gennemfør købet
→ Overtag boligen

→ **Boligsalg**

Guide: Boligkøb

Undersøg boligen →

Forbered købet

Opdateret 06.11.2009

Før du kommer så vidt som til at købe en bolig, bør du forberede dig grundigt. Nedenfor finder du en guide til hvad, du skal overveje, afklare eller udarbejde, inden du er klar til at købe en bolig.

1. Læg budget
Læg budget og find ud af, hvad du har råd til. Budgettet skal du også bruge, når du skal i banken og låne.

■ Læs mere om at lægge budget

2. Bliv forhåndsgodkendt til et lån
Gå i banken og bliv forhåndsgodkendt til et lån, så du er parat til at handle, når du finde den rigtige bolig. Samtidig kan du med fordel overveje, hvilken finansieringsform, der passer til dig.

3. Klarlæg behov
Find ud af, hvilke krav selve boligen skal leve op til, og hvilke krav lokalområdet skal leve op til. Gør op med dig selv, hvor du vil gå på kompromis og hvad du vil insistere på. Find også ud af, hvilken type bolig, der interesserer dig - f.eks. ejerbolig, andelsbolig eller ideel anpart.

■ Læs mere om at klarlægge behovene

4. Søg efter og se på forskellige boliger
Du kan bl.a. søge på Internettet eller i avisernes boligannoncer. Du kan også få en advokat eller en ejendomsmægler til at hjælpe dig med boligsøgningen. Mange ejendomsformidlere har desuden køberkartoteker, du kan vælge at lade dig skrive op i.

■ Læs mere om at søge bolig

Persuasive design in IA

Principle of Suggestions: Suggesting a certain action or behaviour at the most opportune moment (Kairos)

- **Browsing**
  - Cross references
  - "Seasonal" promotion of categories

- **Searching**
  - Suggesting additional search facets or search terms
  - Reformulation ideas in case of zero hits, large hit lists, small hit lists, simple searches

Classic Catalog

Search: kennedy

🔍 Explore Related Searches

New York Public Library

RETURN TO WWW.NYPL.ORG

Search Found In
Author (5195)
Subject (2356)
Title (2182)

Format
BOOK/TEXT (7655)
MICROFORM (612)
DVD (385)
WEB RESOURCE (350)
MUSIC CD (258)
+ more

Collection
Circulating (1909)
Non-Circulating (8078)
Adult (10084)
Young Adult (137)
Children's (266)
+ more

Location
115th Street (1)
115th Street Adult (65)
115th Street Adult Reference (1)
115th Street Children (37)
115th Street Young Adult (9)
+ more

Language
English (9818)
French (178)
Spanish (174)
No linguistic content (162)
German (139)
+ more

Results (1 - 25 of 10660) for kennedy

Sorted by Relevance | Title | Date

1 **2** 3 4 5 next

John F. Kennedy / Robert Dallek
Dallek, Robert.
BOOK/TEXT
+ Show copies on order
2011
✓ Place hold   🛒 Save this record   ✓ More info

Kennedy junior : roman / Pierre Mérot
Mérot, Pierre.
BOOK/TEXT
AVAILABLE - OFFSITE - Request in Advance - ReCAP 10-8939 - ADV REQUEST
2010
🛒 Save this record   ✓ More info

Kennedy vs. Carter : the 1980 battle for the Democratic Party's soul / Timothy Stanley
Stanley, Timothy.
BOOK/TEXT
AVAILABLE - Mid-Manhattan Non-Fiction Fifth Floor - 324.973 S - ---
2010
+ Show all 3 available copies/volumes
✓ Place hold   🛒 Save this record   ✓ More info

The Kennedy assassination-- 24 hours after : Lyndon B. Johnson's pivotal first day as president / Steven M. Gillon
Gillon, Steven M.
LARGE PRINT
AVAILABLE - Andrew Heiskell Non-Fiction - LG PRINT 973.922 G - ---
2010
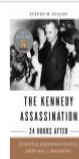+ Show all 6 available copies/volumes
✓ Place hold   🛒 Save this record   ✓ More info

Kennedy v. Nixon : the presidential election of 1960 / Edmund F. Kallina, Jr
Kallina, Edmund F. (Edmund Frank), 1943-
BOOK/TEXT
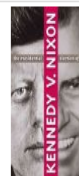AVAILABLE - Schwarzman Building (42nd Street & 5th Avenue) - Milstein Division - IBM 10-7128 - USE IN LIBRARY
2010
🛒 Save this record   ✓ More info

Joseph P. Kennedy presents : his Hollywood years / Cari Beauchamp
Beauchamp, Cari.
BOOK/TEXT
2 holds on first copy returned of 1 copy
AVAILABLE - Battery Park Non-Fiction - B Kennedy B - ---
2010
✓ Place hold   🛒 Save this record   ✓ More info

Dear Mrs. Kennedy : A World Shares Its Grief

Refine by Tag:
1939 1945 world war   african americans   dance   feature films   great britain   jacqueline kennedy   onassis   **john f kennedy**   john f kennedy   center for the performing arts   kennedy family   legislators   **presidents**   robert f kennedy   theater   **united states**   video   video recordings for the hearing impaired
[Show more tags]

Popular Choices:
People looking for this, may want to borrow these:
- Edge of darkness [videorecording] / Warner Bros. Pictures presents ; in association with GK …
- Curious George 2. Follow that monkey [videorecording] / Imagine Entertainment ; Toon City …
- Manhattan Theatre Club records 1964-2004 (bulk 1970-1994)

Persuasive design in IA

Principle of Surveillance : monitoring the behaviour of another to modify behaviour in a specific way

- **Browsing**
  - Display of User tags, User navigation trails, Users recommend, Mostly read

- **Searching**
  - Ranking based on earlier successful searches

AALBORG KOMMUNE

aa

Borger >> | Erhverv >> | Politik >> | Presse >> | Job og karriere >> | Om kommunen >>

Job ved Aalborg Kommune
Finder du på nettet >>

Mest besøgte sider

Boligstøtte Borgerservice
Sygesikring **Lokalplaner** **Ean**
Flytteguide Bibliotek **Job**
Daginstitutioner Find vej **Kontakt**
Pas **Annoncer** Sociale ydelser
Skolernes feriekalender

Aalborg**CYKELBY** >>

Seneste nyt

Lån en e-boglæser

Aalborg Bibliotekerne starter nu udlån af e-boglæseren - SONY PRS-600. Den kan indeholde flere hundrede bøger, den vejer 282 g og er mindre end A5.

>> Ramasjang pakkeleg
Midlertidig lukning på fire bybiblioteker
>> Online omsorg
>> Gud, sex og mad
>> Endnu en pris til Aalborg Bibliotekerne
>> Arkiv

Genveje

Selvbetjening
Genvej til aktuelle selvbetjeningsløsninger

- Her kan du... ▼ OK

Borger
Skyd genvej til populære tjenester

- Find det hurtigt her... ▼ OK

Erhverv
Skyd genvej til populære tjenester

- Find det hurtigt her... ▼ OK

ER DU BORGER I DK
ER DU NUMMER ÉT
I KØEN
borger.dk
DET SKAL VÆRE NEMMERE
AT KØBE PÅ NETTET I DANMARK

Digital postkasse
Trygt og sikkert
Altid åbent

KARNOV

Lovpligtige annoncer
Fra teknik- og miljø-området

Handicapchef
Aalborg Kommune søger ny handicapchef klik her og læs mere

Senest opdateret den 16. november 2010

Take aways

- Persuasive design is **already in use** and **no revolutionary features** appeared from the analysis

- Persuasive strategies provide **framework** to identify persuasive potential

- **Challenges:**

    - Development of persuasive features and techniques

    - Identification of zones of intervention

    - Identification of useful user behavior (to survey and monitor)

    - Identification of Kairos and ethical issues

Literature

Fogg, B. J. (2003). *Persuasive technology*. San Francisco (Cal): Morgan Kaufmann Publishers.

Hasle, P (2006). The persuasive expansion: rhetoric, information architecture, and conceptual structure. Schärrfe, H, Hitzler, P & Øhrstrøm, P (eds*.) ICCS 2006, LNAI 4068*. Berlin: Springer. 2–21.

Jacob, E. K. & Loehrlein, A. (2009). Information Architecture. *Annual Review of information Science and Technology,* 43. 147-186.

Jansen, B. J. 2005. Seeking and Implementing Automated Assistance during the Search Process. *Information Processing & Management.*41(4), 909-928.

Lykke, M. (2009). Persuasive design strategies: means to improve the use of information organisation and search features in web site information architecture?. *Proceedings ASIST Special Interest Group on Classification Research 20th Workshop on November 7*, 2009.

Markey, K (2007a). Twenty-Five Years of End-User Searching, Part 1: Research Findings. *Journal of the American Society for Information Science and Technology,* 58(8). 1071-1081.

Markey, K (2007b). Twenty-Five Years of End-User Searching, Part 2: Future research directions. *Journal of the American Society for Information Science and Technology,* 58(8). 1123-1130.

Oinas-Kukkonen, H. & Harjumaa, M. (2009).Persuasive systems design: Key issues, process model, and system features. *Communications of the Association for Information Systems*, 24 (28). 485-500.

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