# Information Architecture

# Information Architecture

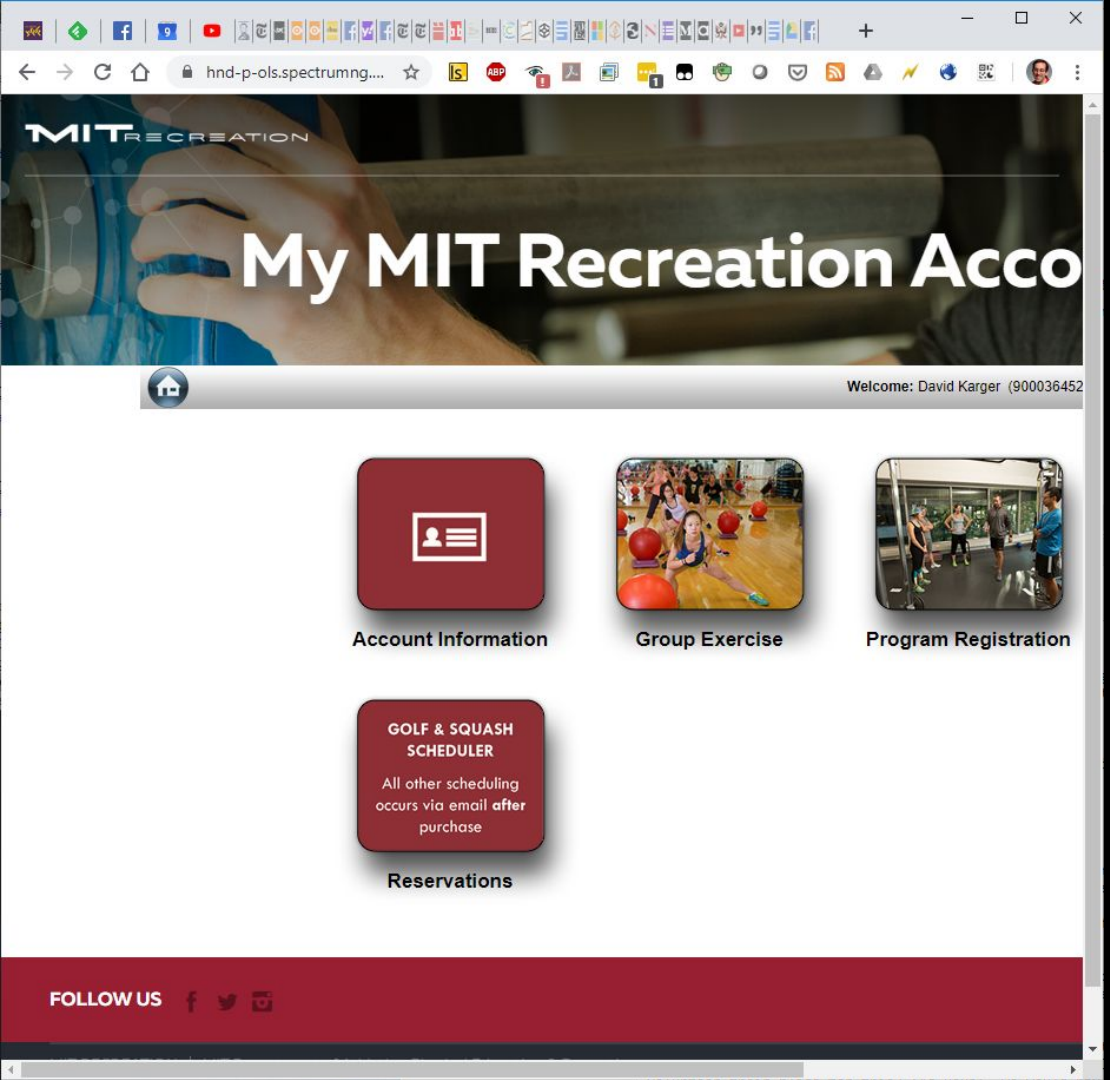
Designing for a common basic goal:

reaching desired information.

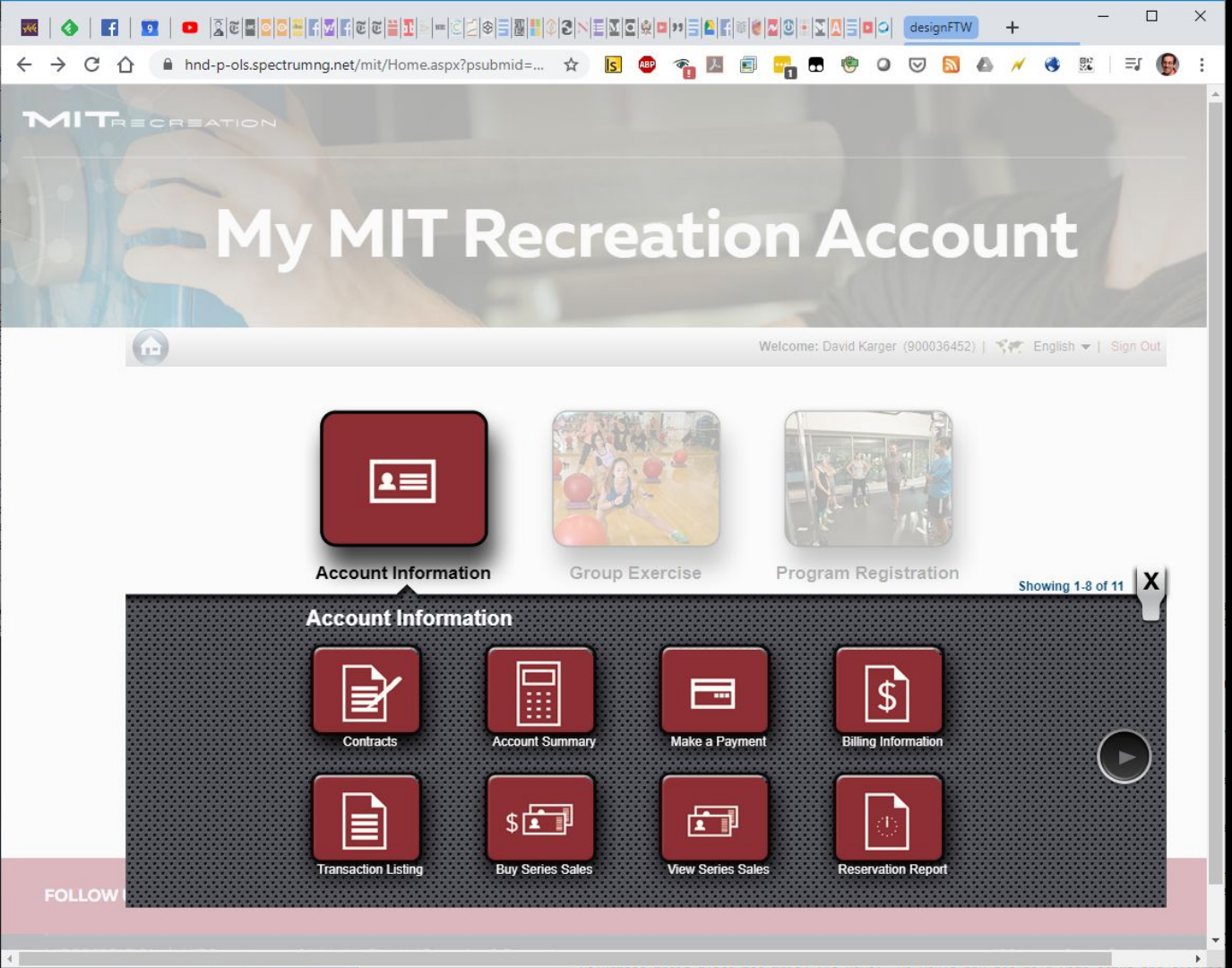
This issue, of supporting a goal-seeking user,
is important even on static web sites.

For example, I want to order some
personal training lessons at DAPER (MIT GYM).

I navigated to the recreation page and saw this.



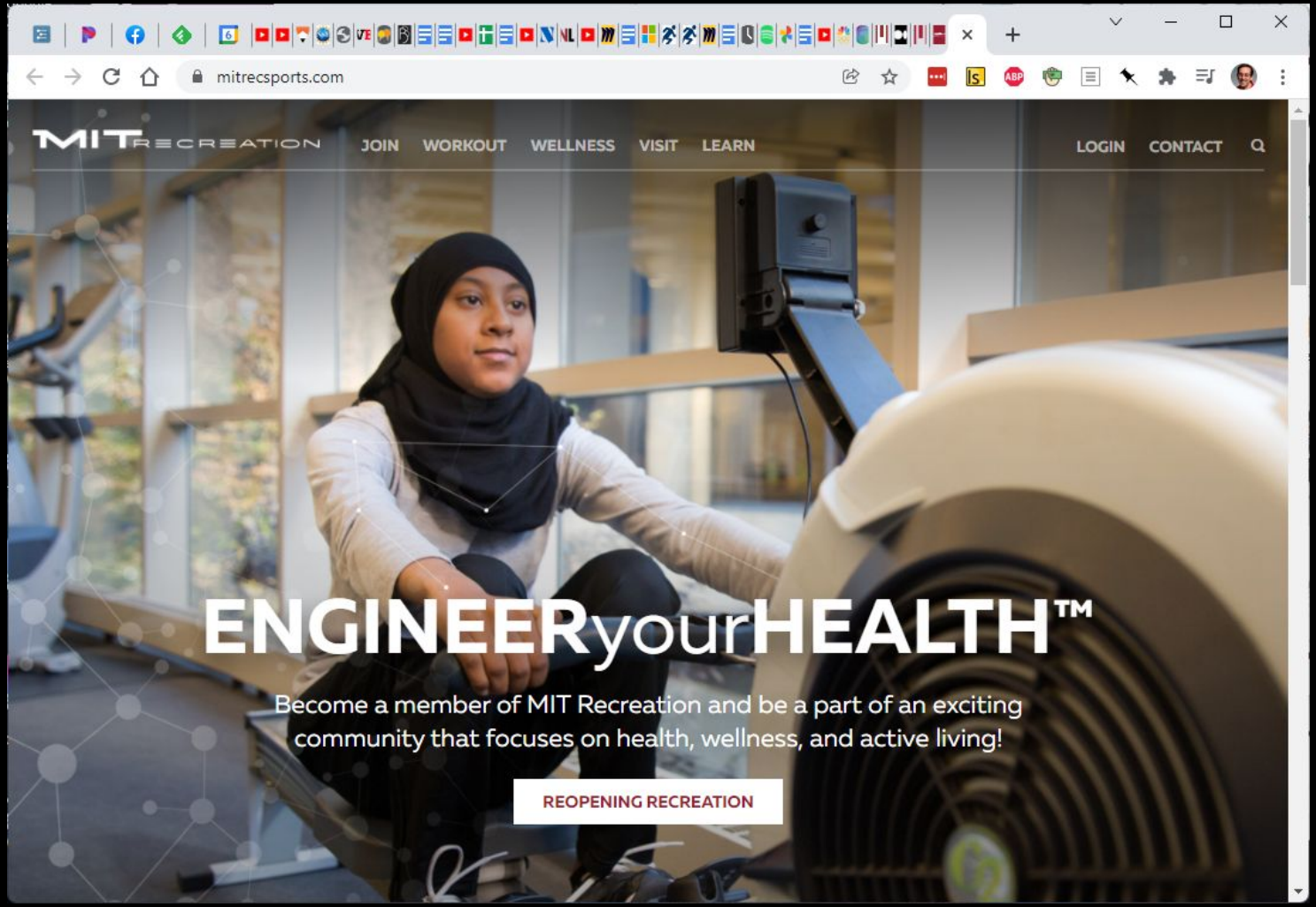

What should I do?


designFTW
hnd-p-ols.spectrumng.net/mit/Home.aspx?psubmid=...
MIT RECREATION
My MIT Recreation Account
Welcome: David Karger (900036452) | English | Sign Out
Account Information
Group Exercise
Program Registration
Showing 1-8 of 11
Account Information
Contracts
Account Summary
Make a Payment
Billing Information
Transaction Listing
Buy Series Sales
View Series Sales
Reservation Report
FOLLOW

What's wrong?

Turns out that the order page for personal training is "Buy Series Sales" (itself a mystery) under account information. Which makes no sense.

New Improved Site


mitrecsports.com
MIT RECREATION
JOIN
WORKOUT
WELLNESS
VISIT
LEARN
LOGIN
CONTACT
ENGINEERyourHEALTH™
Become a member of MIT Recreation and be a part of an exciting community that focuses on health, wellness, and active living!
REOPENING RECREATION

And the dropdown for workout includes sensible categories, including private lessons.

mitrecsports.com

MIT RECREATION JOIN WORKOUT WELLNESS VISIT LEARN LOGIN CONTACT

**Instructional Programs**

Train together with our instructional programs for youth and adults.

**Private Lessons**

Our coaches, trainers and instructors are here to help shape your success.

**Group Exercise**

Balance your schedule with group classes that range from Yoga to Pilates.

**Open Recreation**

Refine your skills in squash, badminton, basketball and more at your convenience.

**Youth Programs**

Discover the best health and wellness options for children from Aquatics to Fitness.

# ENGINEERyourHEALTH™

Become a member of MIT Recreation and be a part of an exciting community that focuses on health, wellness, and active living!

REOPENING RECREATION

https://www.mitrecsports.com/#

Today's version of the site is much improved.

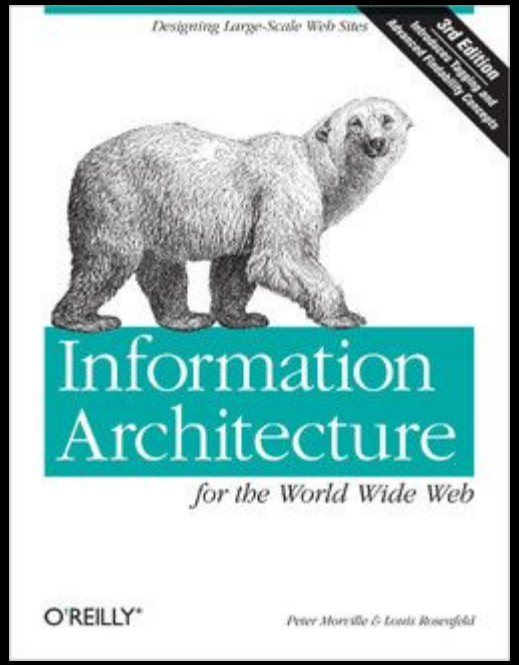
There's a top level menu listing common user goals

# Information Architecture

- Defining a structure for a website, app or other project that requires one
- Helps users understand where they are and where to go
- If poor, users get lost
- Represented by site maps, categorizations, metadata and so on
- Variety of organization mechanisms
  - hierarchies
  - categories/tags/filtering
- Menus also use information architecture
  - menu hierarchies help users navigate to relevant entries

No user would enjoy content that is
disorganized and difficult to navigate through.

Because finding the information they need
is very time-consuming,
people prefer leaving the website immediately
rather than searching for what they want,
even though the content might have been resourceful
and the user interface pretty.




Book

Peter Morville and Louis Rosenfeld

Information Architecture for the World Wide Web

# Information Scent

# Information Scent

- Information foraging theory
  - Humans gather information like animals gather food
  - Constantly evaluating and making decisions to maximize information collected against cost of obtaining it
- Information scent
  - Generally, signifiers of what kind of information can be found in a given “direction” from a UI
  - Specifically, cues on a link anchor indicating how profitable it will be to follow the link

Users depend on visible cues to figure out
how to achieve their goals with the least effort.

For information gathering tasks,
like searching for information on the web,
it turns out that this behavior can be modeled
much like animals foraging for food.

An animal feeding in a natural environment asks questions like:

Where should I feed?

What should I try to eat (the big rabbit that's hard to catch, or the little rabbit that's less filling)?

Has this location been exhausted of food that's easy to obtain, and should I try to move on to a more profitable location?

Information foraging theory claims that
we ask similar questions when we're collecting information:

Where should I search?

Which articles or paragraphs are worth reading?

Have I exhausted this source, should I move on to the next search result or a different search?

(Pirolli & Card, "Information Foraging in Information Access Environments," CHI '95.)

# Gradation of Exploration Costs

- Glance
  - images/icons, short salient words, other signifiers
- Read
  - description, keywords
- Hover or press
  - cursor change, highlight, tooltip, submenu, preview
- Click through
  - target page, dialog box, or mode
- Invoke
  - feedback effect on the model state

For the user, collecting information scent cues is done progressively, with steadily increasing cost.

Some properties can be observed very quickly,
with a glance over the interface:
detecting affordances (like buttons or hyperlinks, if they’re well designed),
recognizing icons (like a magnifying glass),
or short and very visible words (like Search in big bold text).

With more effort, the user can read:
long labels, help text, or search result snippets.

Reading is clearly more expensive than glancing,
because it requires focusing and thinking.

Still more time and effort is required to hover the mouse or press down,
because your hands have to move, not just your eyes.
We inspect menubars and tooltips this way.

Note that tooltips are even more costly,
because you often have to wait a time for the tooltip to appear.

Clicking through a link or bringing up a dialog box is next,
and actually invoking a command to see its effect
is the costliest way to explore.

Exploration is important to learning.

But much of this reading has been about techniques for reducing the costs of exploration, and making the right feature more obvious right away.

An interface with very poor affordances will be very expensive to explore.

Imagine a webpage whose links aren’t distinguished by underlining or color – you’ve just taken away the Glance, and forced the user to Read or Hover to discover what’s likely to be clickable.

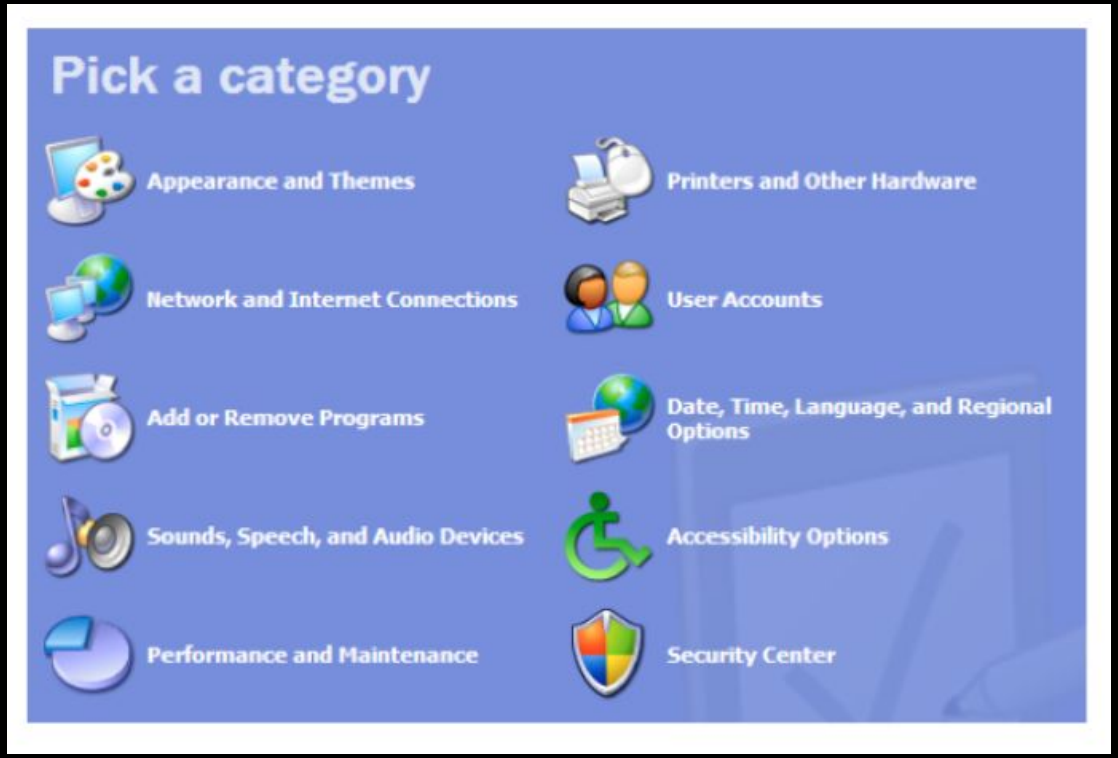
Now imagine it in a foreign language
– you've just taken away Read.

Now get rid of the mouse cursor feedback
– no more Hover, and the user is forced to Click all over the place to explore.

Your job as a designer is to make the user's goal
as easy to recognize in your user interface as possible.

# Give Good Information Scent

A link should smell like the content it leads to



Hyperlinks in your interface
– or in general, any kind of feature, including menu commands and toolbar buttons –
should provide good, appropriate information scent.

Examples of bad scent include
misleading terms, incomprehensible jargon
(like “Set Program Access and Defaults” on the Windows XP Start menu),
too-general labels (“Tools”),
and overlapping categories (“Customize” and “Options” found in old versions of Microsoft Word).

Examples of good scent can be seen in the
(XP-style) Windows Control Panel, which was carefully designed.

For example, at “Printers and Other Hardware.”
Why do you think printers were singled out?

Presumably because task analysis (and collected data) indicated
that printer configuration was a very common reason
for visiting the Control Panel.

Date, Time, Language, and Regional Options is another example.

It might be tempting to find a single word to describe this category
– say, Localization –
but its scent for a user trying to reset the time would be much worse.

# Improving Information Scent

- To learn more about this site, click here
- Learn more about this site here
- Learn more about this site
- Link to this site's about page.

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- Learn more about this site
- About

Poor information scent is on the left; much better is on the right.

The first example shows an unfortunately common pathology in web design:
the “click here” link.

Hyperlinks tend to be highly visible, highly salient, easy to pick out at a glance from the web page – so they should convey specific scent about the action that the link will perform.

“Click here” says nothing.

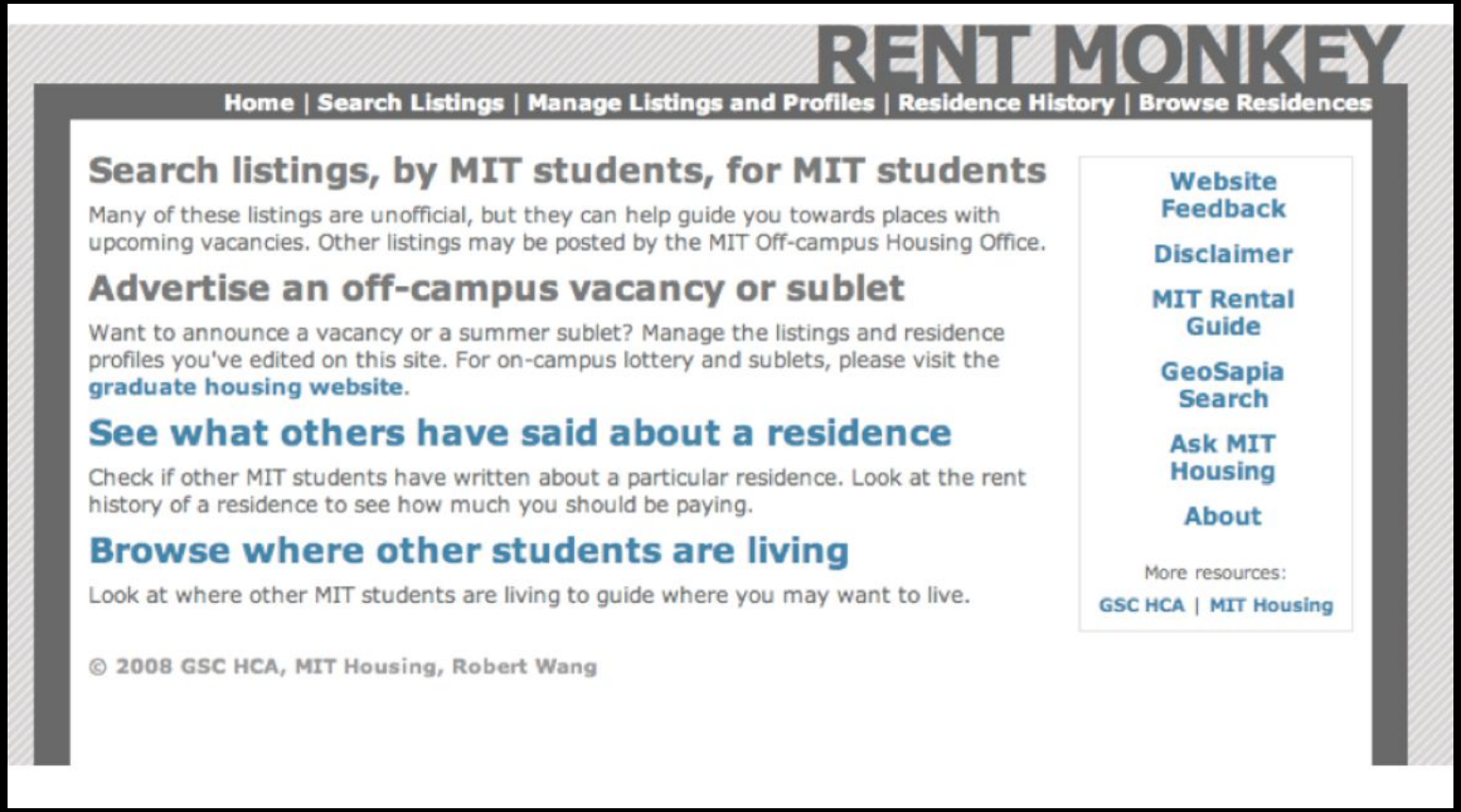
Your users won’t read the page, they’ll scan it.

# Right or left?

Audio and TV
Books
Computing
Fashion
Furniture
Gardening

**Audio and TV:** Camcorders, DVD and Video, Hi-Fi...
**Books:** Bestsellers, Factual, Education...
**Computing:** Computers, Games, Printers
**Fashion:** Mens, Womens, Kids...
**Furniture:** Bathrooms, Bedrooms, Kitchen...
**Gardening:** Seeds, Plants, Pots

# Lots of scent but hard to scan/glance



Here’s an example of going overboard with information scent.

There is so much text in the main links of this page (Search listings…, Advertise…, See…, Browse…) that it interferes with your ability to Glance over the page.

A better approach would be to make the links themselves short and simple, and use the smaller text below each link to provide supporting scent.