College of Information Studies

University of Maryland Hornbake Library Building College Park, MD 20742-4345

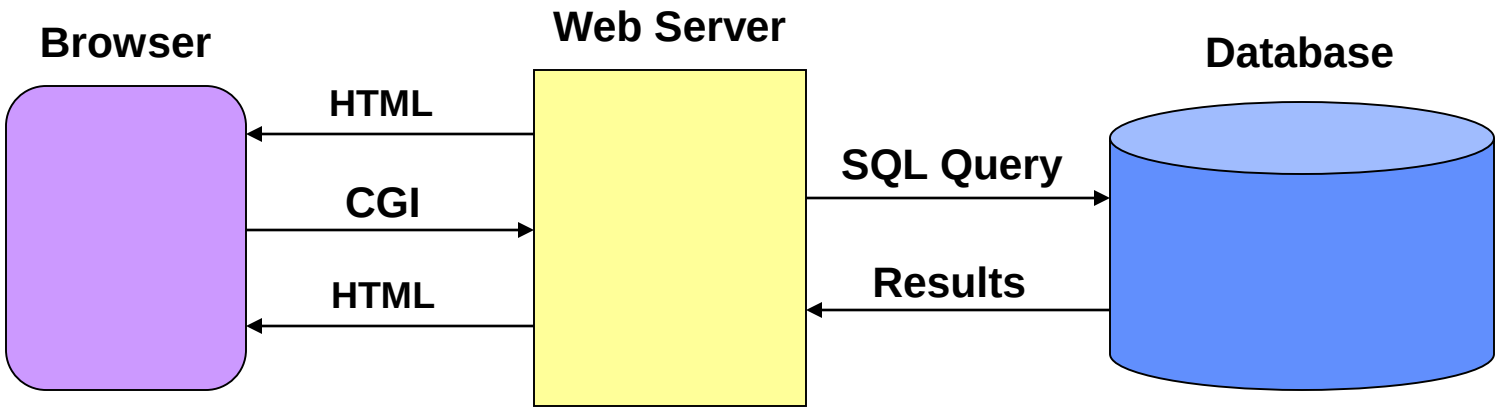
Content Management Systems

Week 14

LBSC 671

Creating Information Infrastructures

Putting the Pieces Together



Why Database-Generated Pages?

- Remote access to a database
  - Client does not need the database software
- Serve rapidly changing information
  - e.g., Airline reservation systems
- Provide multiple “access points”
  - By subject, by date, by author, …
- Record user responses in the database

Why Content Management Systems?

- Separation of content and appearance
- Separation of roles
- Standardization of common “design patterns”
  - Login and password recovery
  - Headlines and drill-down
  - Site map
  - Search
  - Shopping cart

Content Management Systems

- WordPress
  - http://wordpress.org
- Joomla
  - http://www.joomla.org
- Drupal
  - https://drupal.org

Roles

- Information architecture design
- Task assignment
- Content generation and modification
- Approval for “publication”
- Publication
- Error correction
- Tracking task progress

Content Management System Structure

- Database stores the content
  - And access control data and parameters
- Server scripting controls the user experience
  - PHP readss database, generates HTML
- (X)HTML conveys the user experience
- User-side scripting enhances interactivity
  - JavaScript may be used for form validation

Client Hardware (PC)

Web Browser (IE, Firefox)

Client-side Programming (JavaScript)

Interchange Language (HTML, XML)

Server-side Programming (PHP)

Database (MySQL)

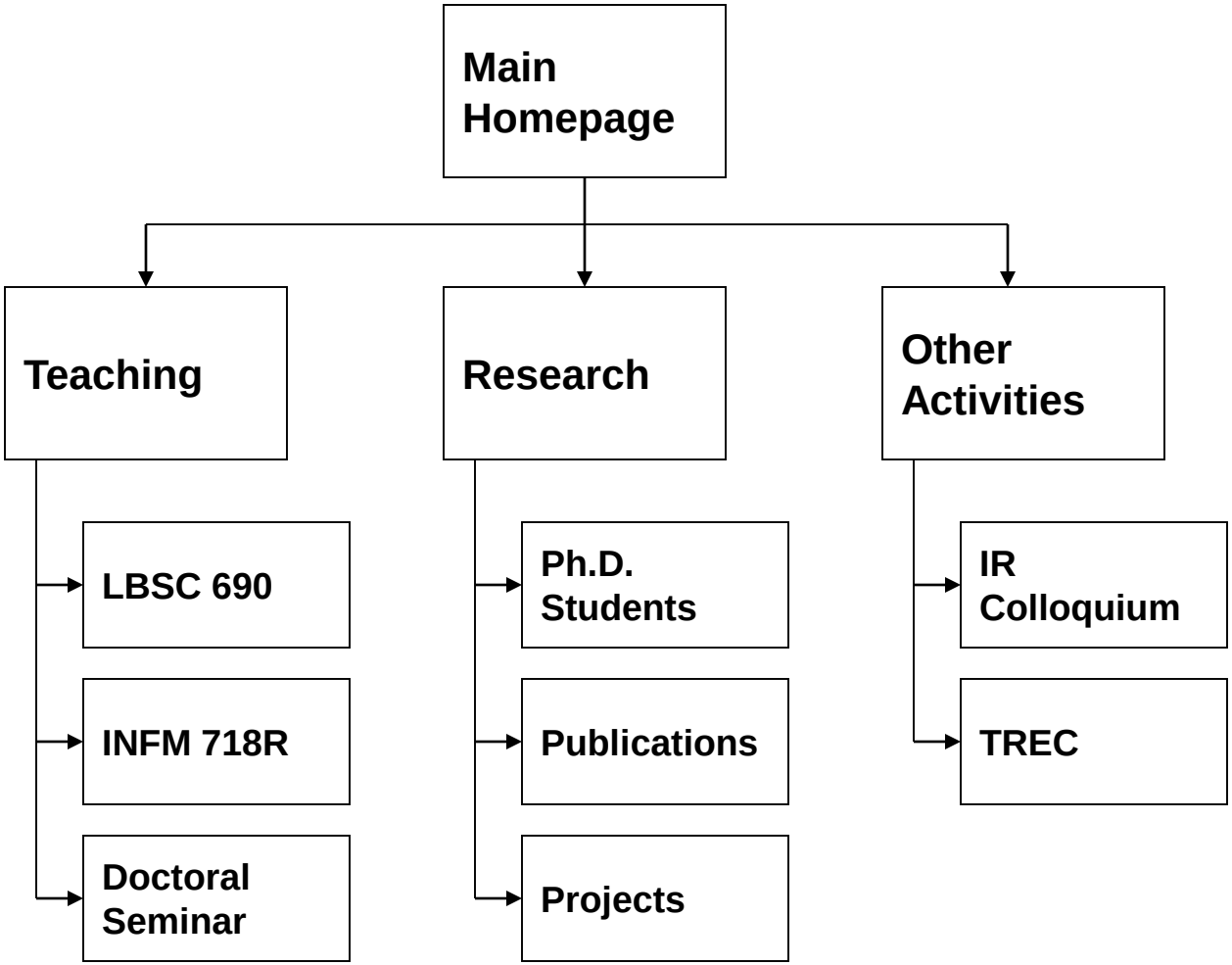
Server Hardware (PC, Unix)

Interface Design

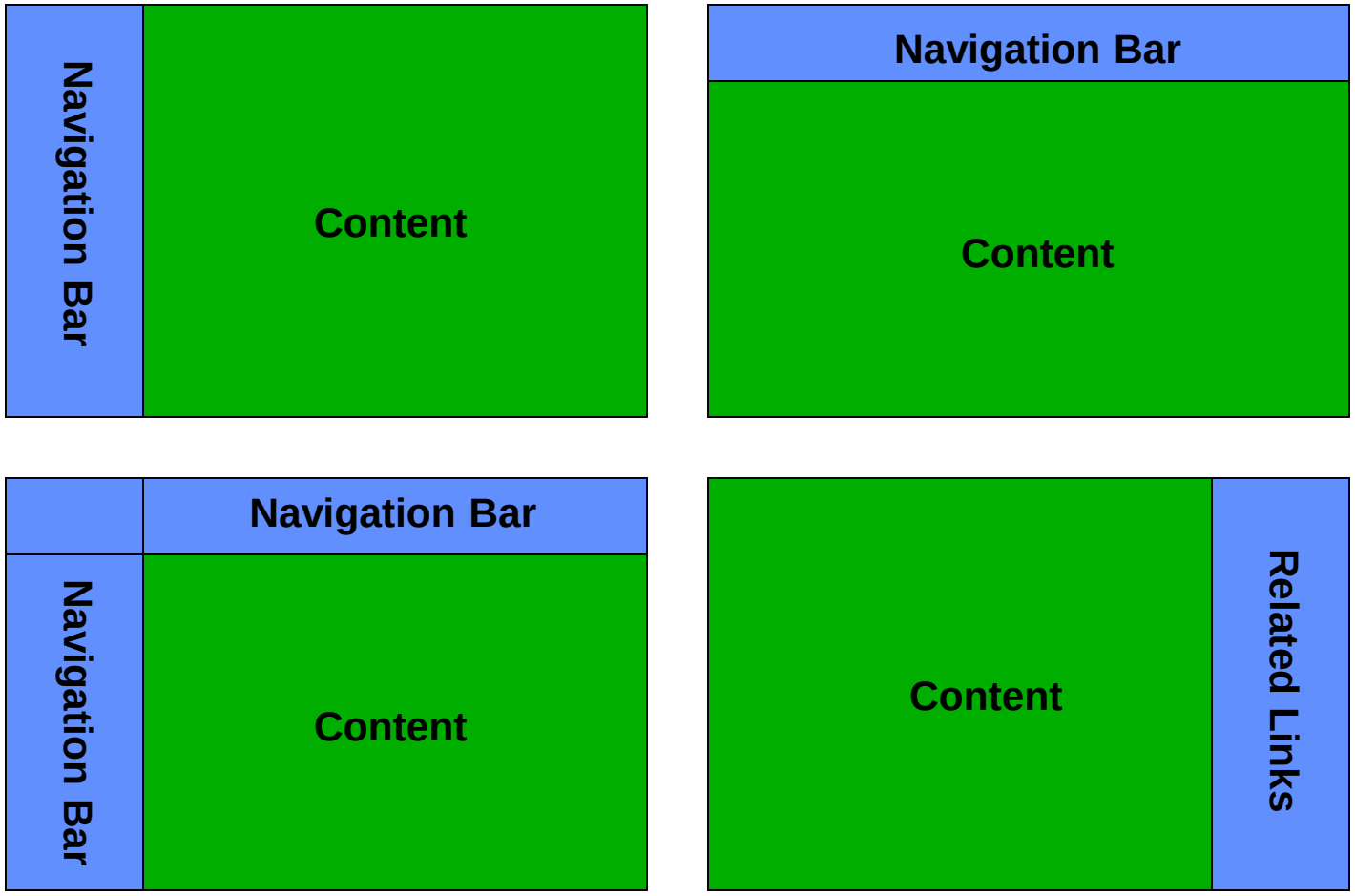
Interaction Design

Business rules

“Site Blueprint”



Grid Layouts



Grid Layout: NY Times

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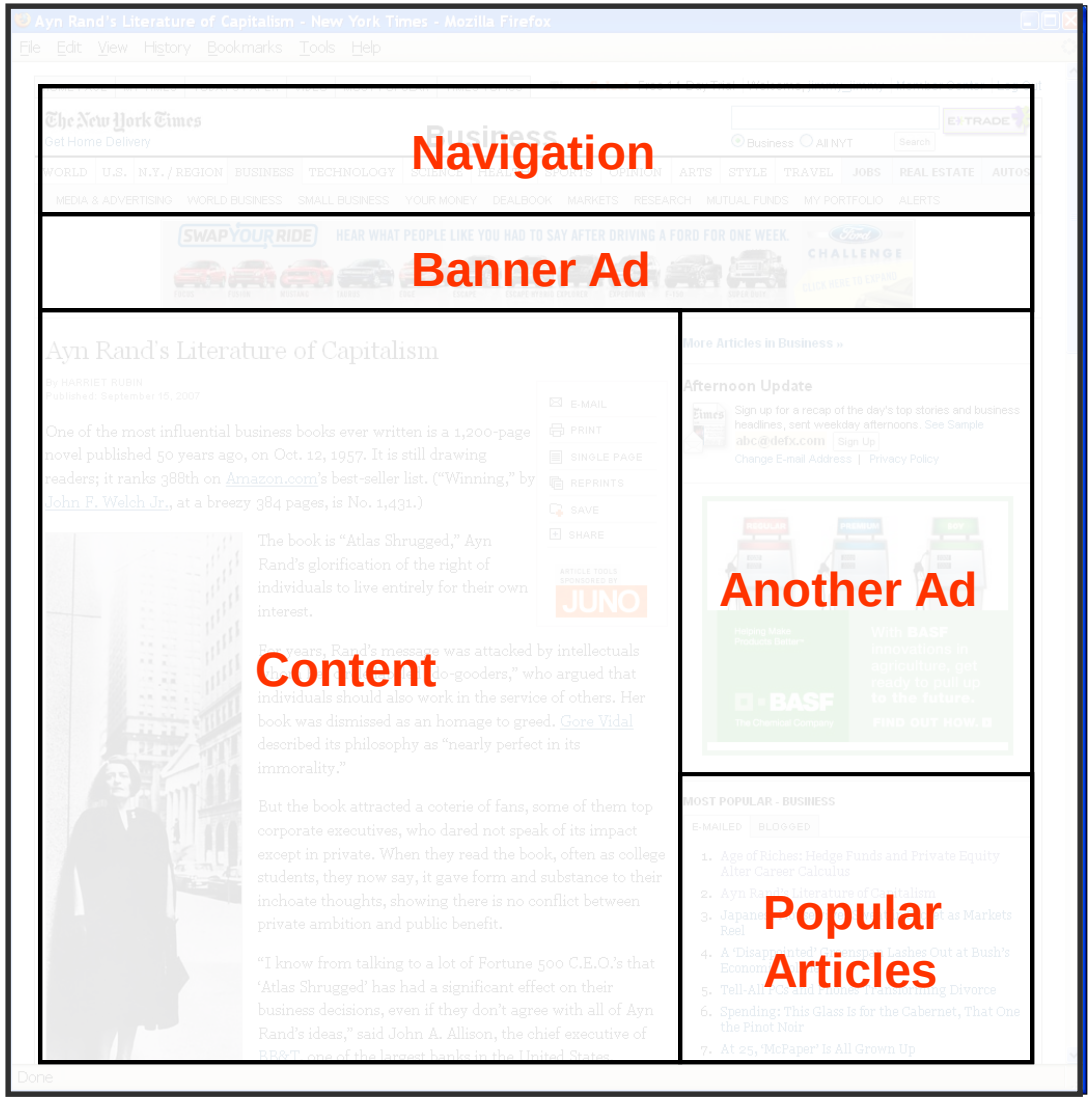
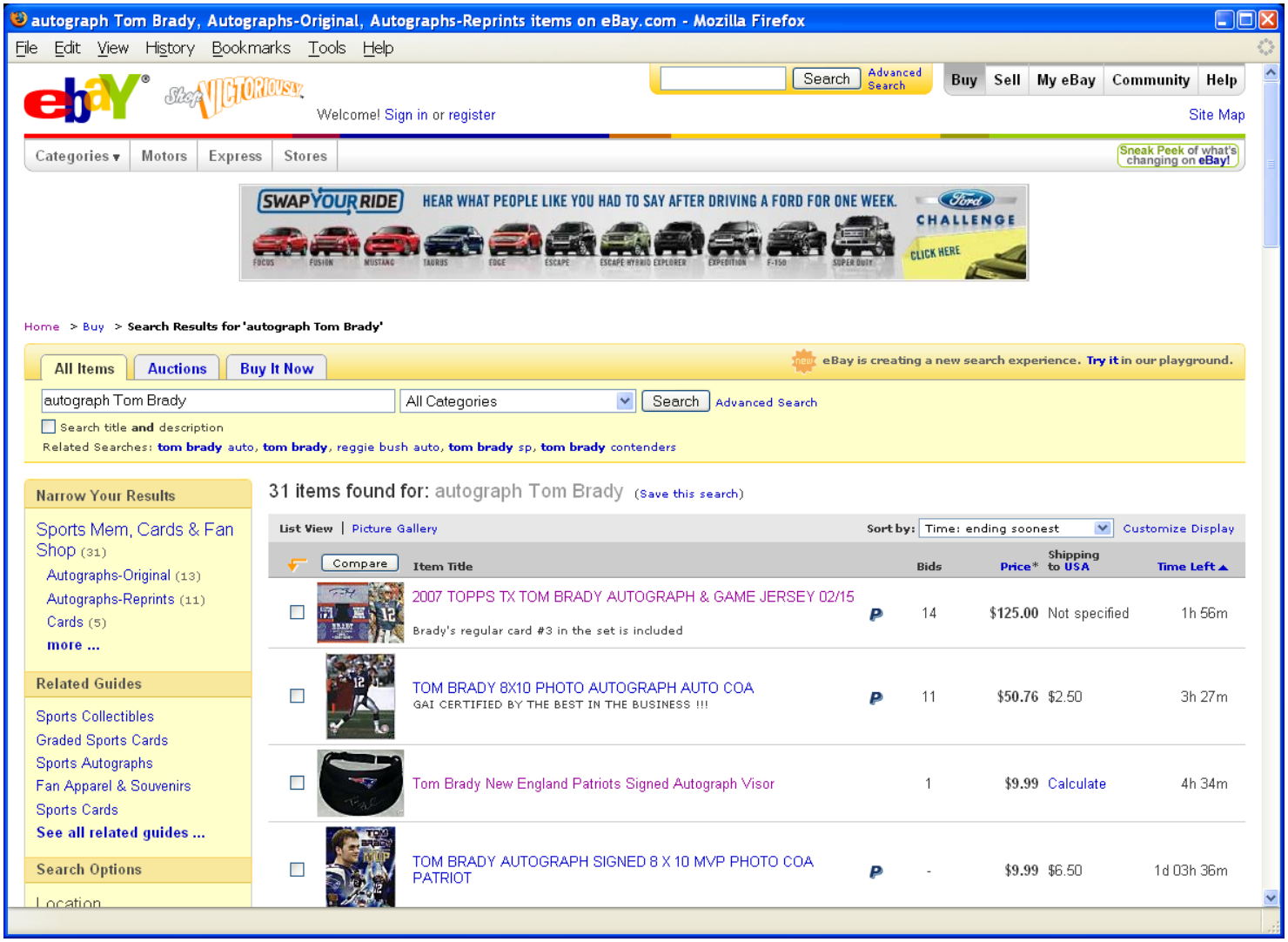
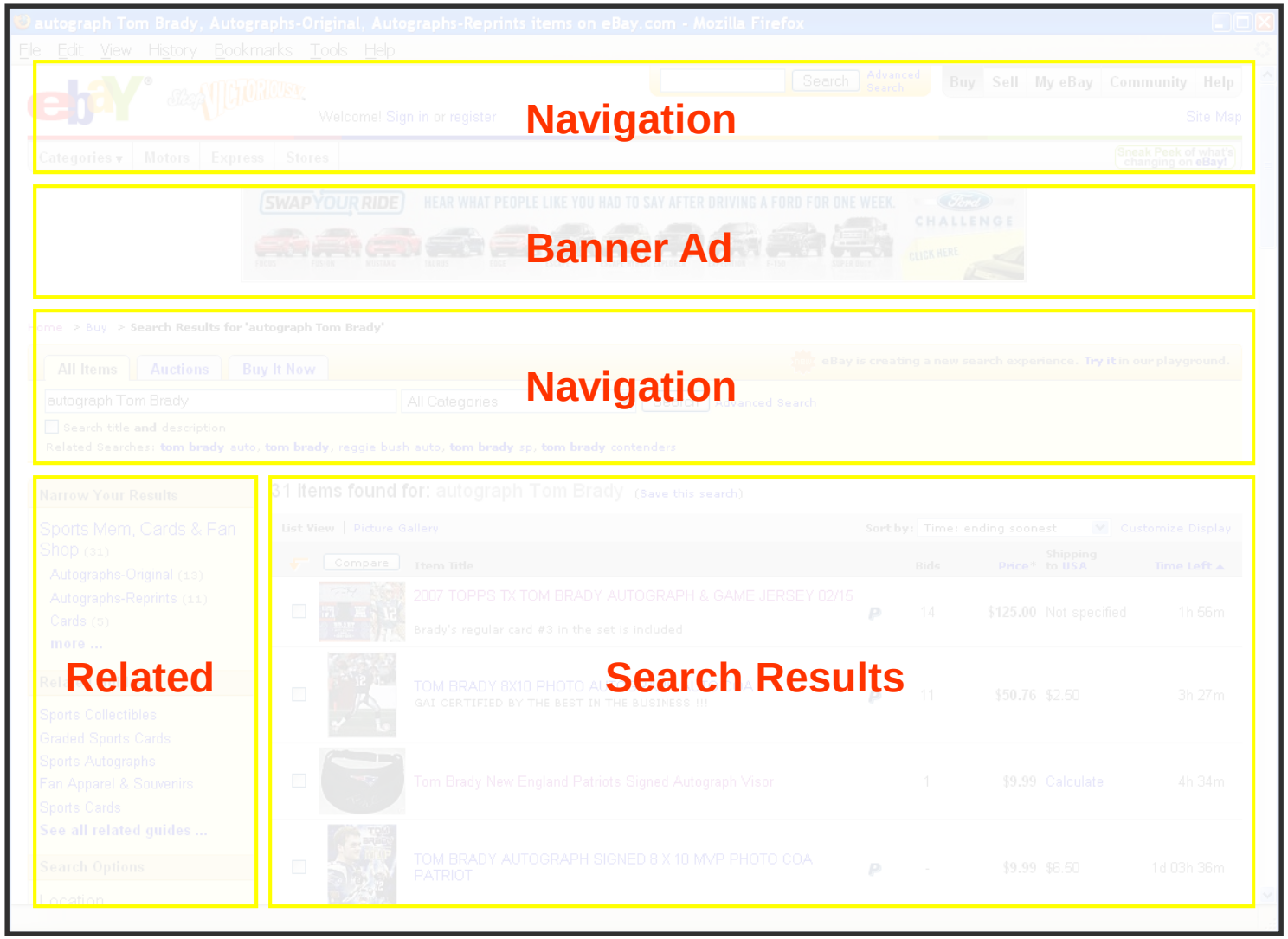


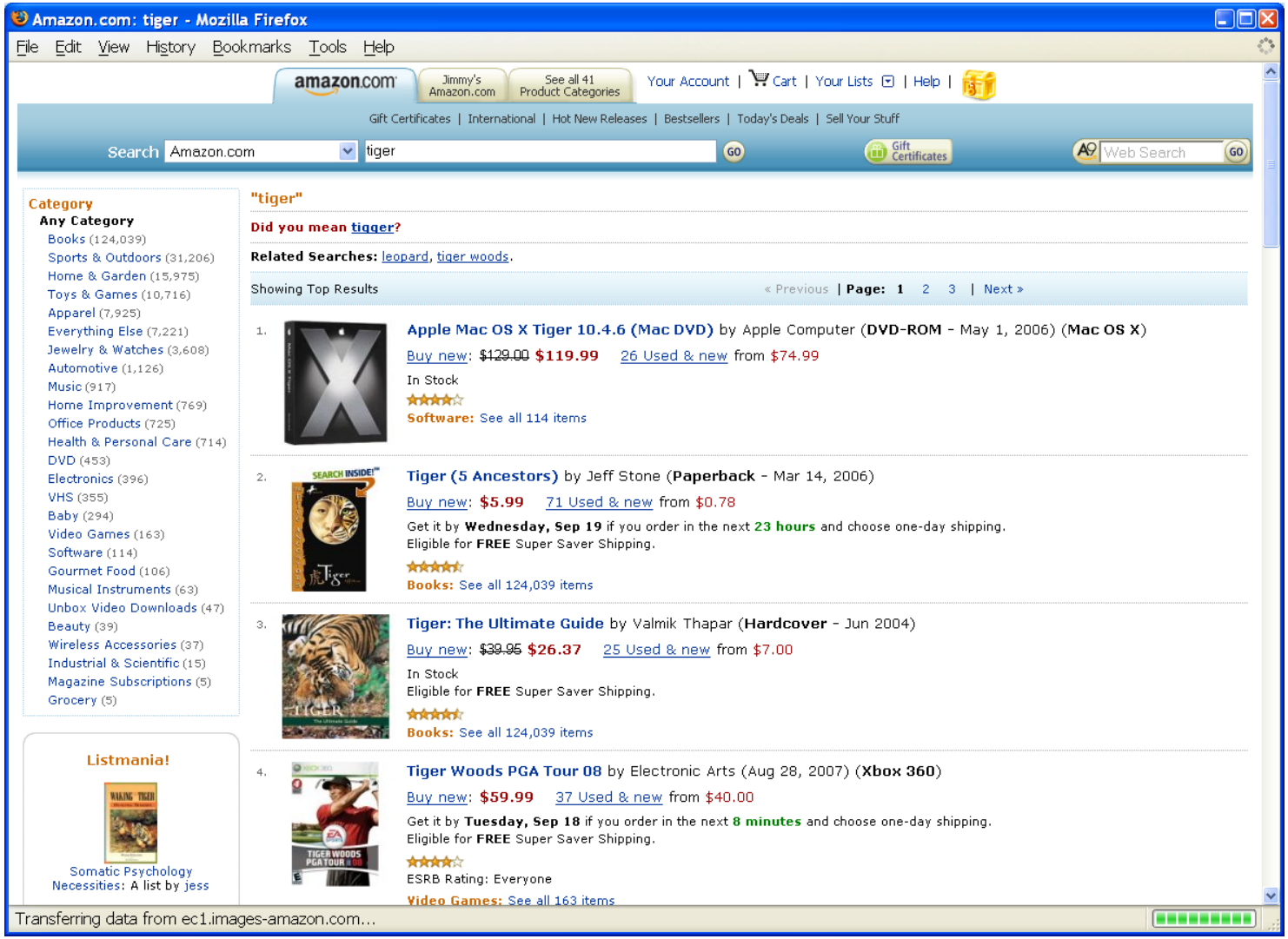
Grid Layout: ebay



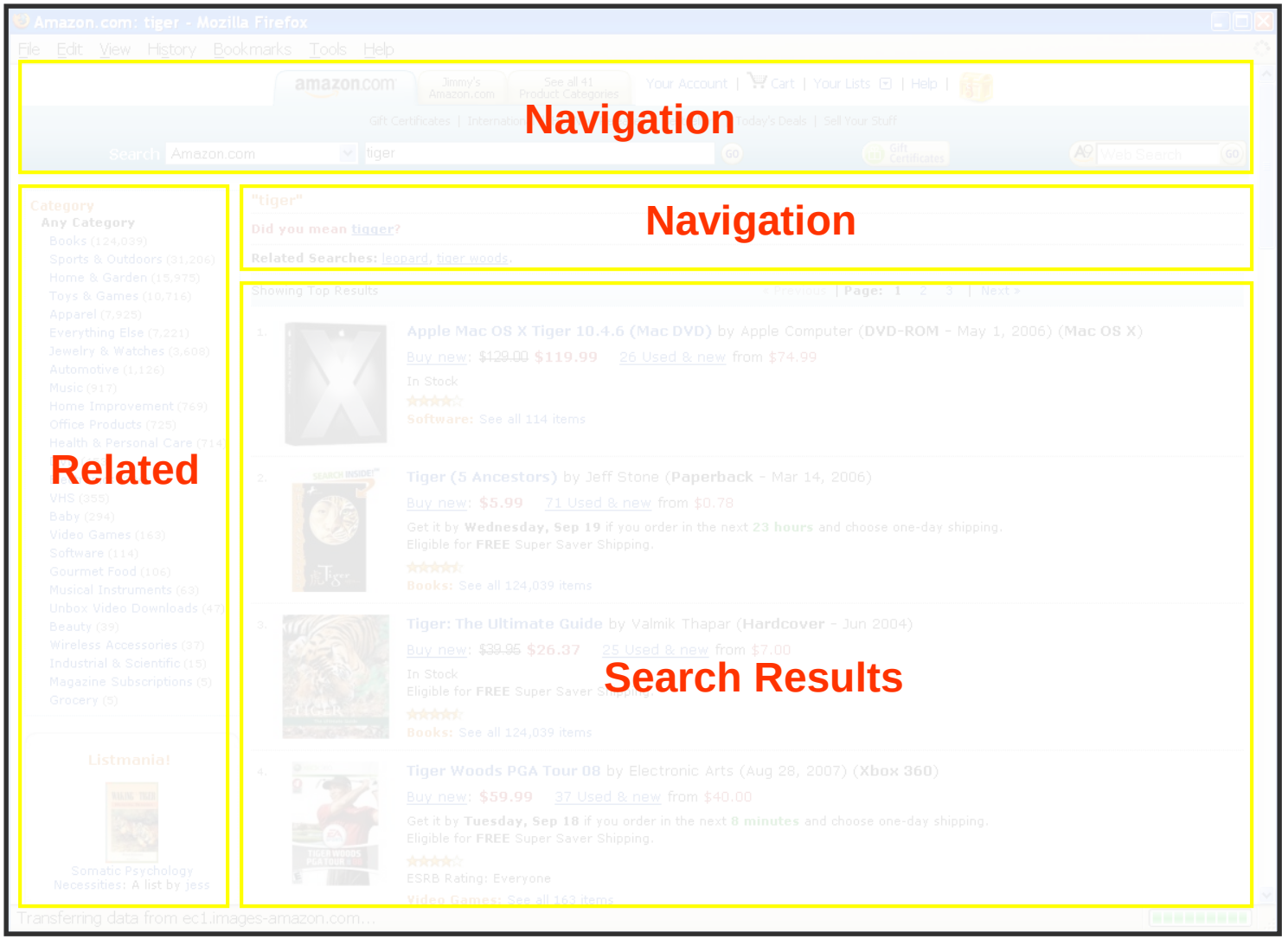
Grid Layout: ebay



Grid Layout: Amazon



Grid Layout: Amazon



Some Layout Guidelines

- **C**ontrast: make different things different
  - to bring out dominant elements
  - to create dynamism
- **R**epetition: reuse design throughout the interface
  - to achieve consistency
- **A**lignment: visually connect elements
  - to create flow
- **P**roximity: make effective use of spacing
  - to group related and separate unrelated elements

Joomla Structure

- Front end
  - The Web site
- Back end
  - Where the Web site is defined

Joomla Components

- Web sites are made up of rectangular pieces
  - Called “modules”
- Two basic types of modules:
  - Displaying content (e.g., articles)
  - Interaction (e.g., login)
- Templates define where modules can be put
  - Templates define abstract “positions”
  - Joomla maps positions to layout in ways appropriate to the device

Joomla Features

- Menus control navigation
  - Menu items control where you can go
- Categories group things (i.e., entities)
  - University courses, Apollo missions, Meetups, …
- Extensions allow you to add new capabilities
  - JCE Editor, Image rotator, Google maps, …

logo
search
navigation
banner
top center
left
content
right
breadcrumbs
footer

Joomla Hosting

- Your own computer
  - Useful as a way to try things out
  - Not easily accessable to others
- Demo account (for 30 days) at joomla.org
  - You can pay to keep it past 30 days
- Web hosting service
  - Longer life, more support, or less cost
  - More complex to set up

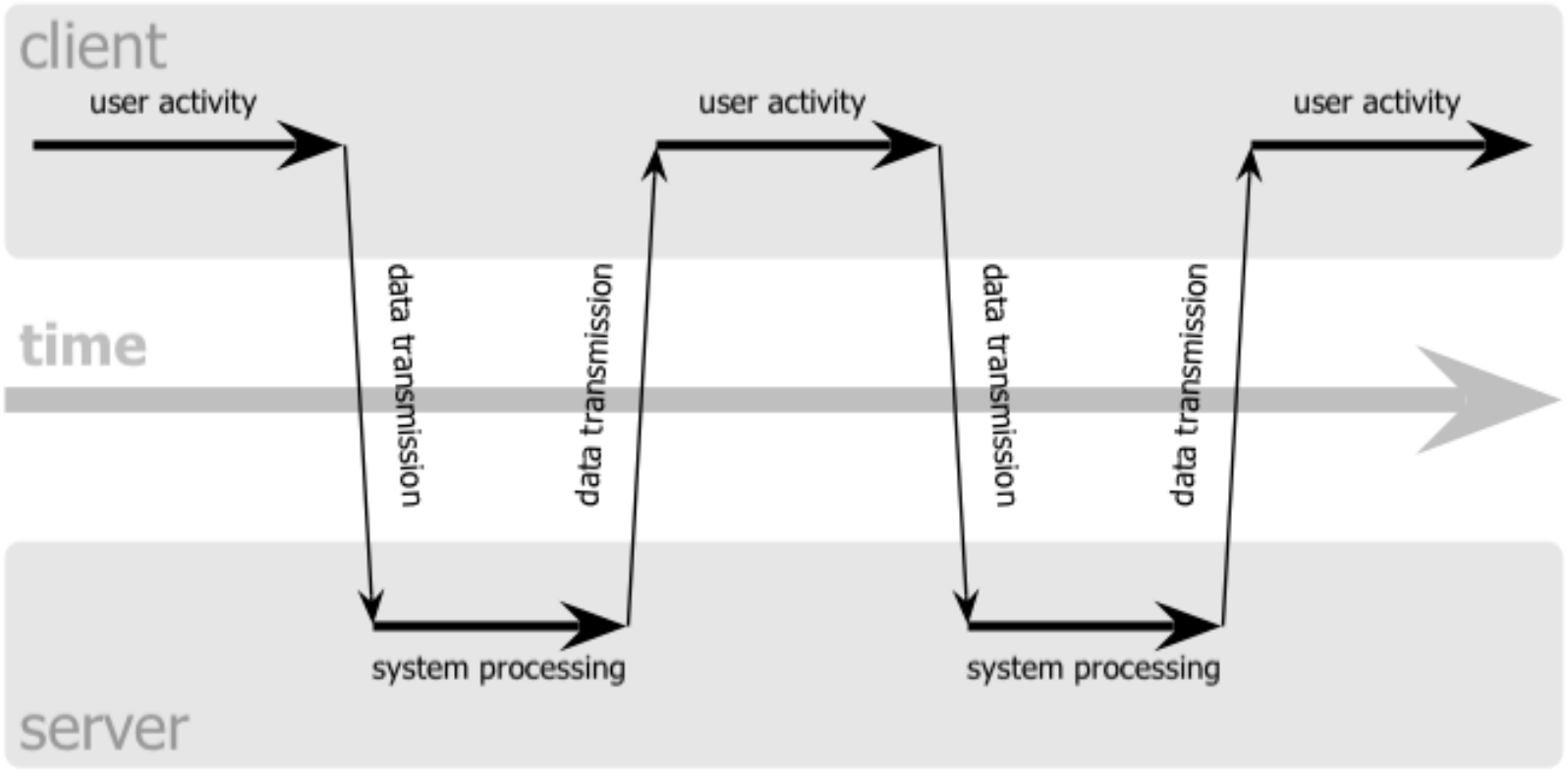
Joomla First Steps

- System->Control Panel
  - Gets to the back-end home
- Install the Joomla Content Editor (JCE)
- Learn how to insert content
  - Images, text without formatting
- Learn how to set up menu items
- Learn how to control layout

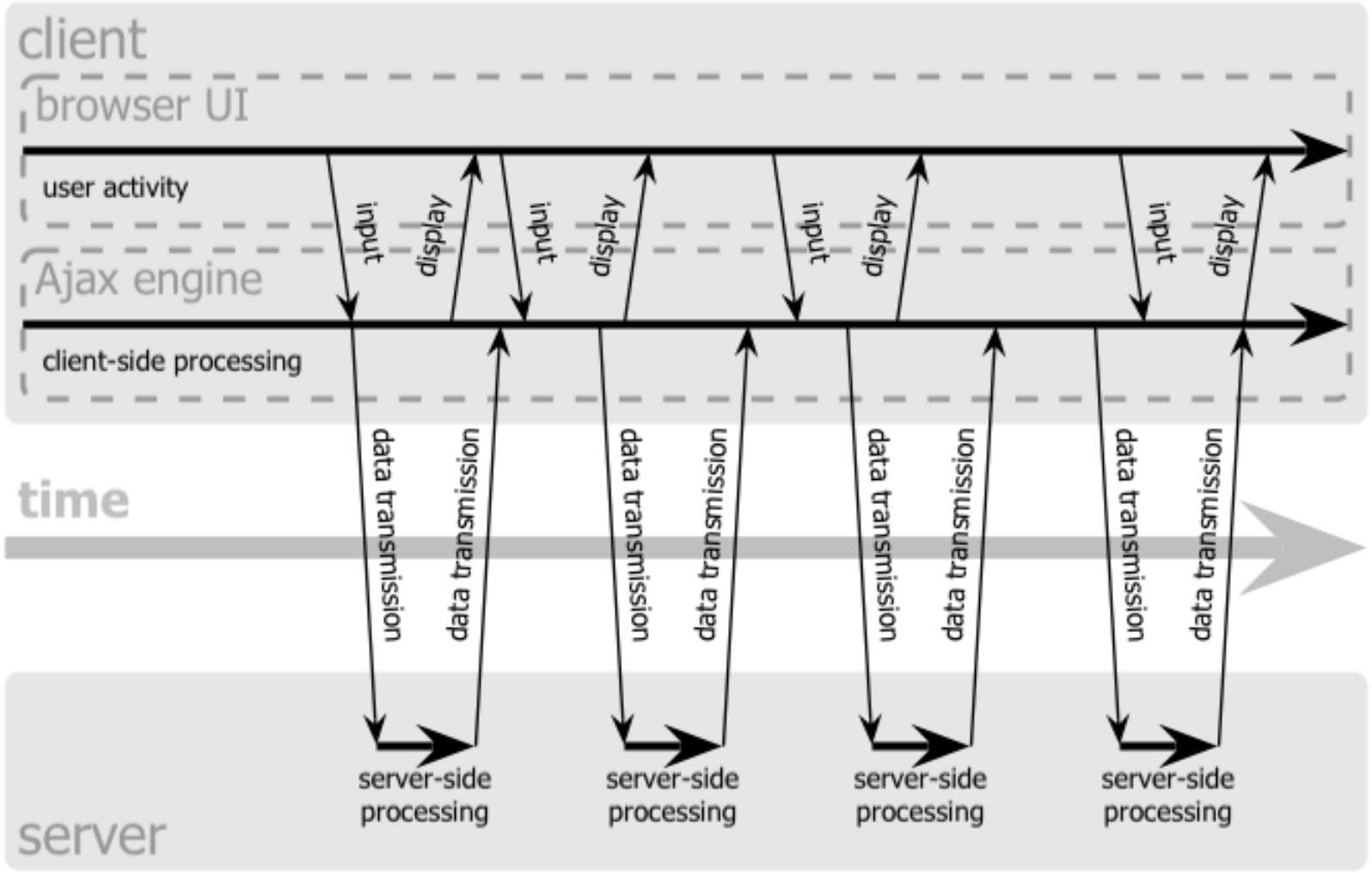
Ajax Applications

- Google Maps
  - http://maps.google.com
- Google Suggest
  - http://www.google.com/webhp?complete=1&hl=en
- Sajax Tables
  - http://labs.revision10.com/?p=5
- Sajax
  - http://www.modernmethod.com/sajax/

classic web application model (synchronous)



Ajax web application model (asynchronous)



Navigation Patterns

- Drive to content
- Drive to advertisement
- Move up a level
- Move to next in sequence
- Jump to related

Before You Go

On a sheet of paper, answer the following (ungraded) question (no names, please):

What was the muddiest point in this semester?