

What Makes A Design Seem Intuitive?

Jared M. Spool
User Interface Engineering

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Personal Data

Contact Information

Title:

First Name:

* Middle Initial:

Last Name:

* Company Name:

Address 1:

* Address 2:

City:

State:

Zip / Postal Code (Please do not use any spaces or dashes):

Country:

Telephone Number:

Who decided what asterisk meant?

When did it become "unintuitive" to do it another way?

Designs Can't Be *Intuitive*

- Designs don't *intuit* anything
- People *intuit* things
- Calling a design "intuitive" is a shortcut
 - Users can intuit what to do with the design right away
 - Doesn't perceive training is necessary

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When Is A Design *not* intuitive?

- When the user looks at it and doesn't know what to do
 - Feels it takes too much time to figure it out
 - Becomes frustrated

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SUPERMODELER: HUGH DUBBERLY

1985 Creative director at Apple
1995 Joins Netscape
1996 Models Internet
2000 Opens Dubberly

By David R. Brown

It is entirely possible that Hugh Dubberly is one of the very few people in the design community who quotes easily and unself-consciously from Plato's Dialogues. As the former vice president of Netscape's Web Design and Site Integration Department and the recent co-founder of his own eponymous design consulting firm, Dubberly--like his favorite Greek philosopher--is a professional shiner of light into the murk and ambiguity of life. "My central concern," he says, "is to figure out how design can be employed to make complex ideas visible and understandable so that we can make better products."

Like iron filings arrayed around a magnet, Dubberly's thoughts are organized around two poles. The first is that design and designers are now utterly central to big, important and fast-growing companies. The second is that designers now have an opportunity and responsibility that meld into and perhaps even herald a new field of practice.

Dubberly believes design now needs to be more about making complex, abstract ideas visible than about creating objects. And the way to do that is with models.

Dubberly notes that for centuries, the designing part of

gain

Profile
SuperModeler
Hugh Dubberly

Eames diagram

Understanding Internet search

A model of brand experience

Razorfish's view on the brand experience

Download complete article

AICCA

THE BROADMOOR COLORADO SPRINGS

Broadmoor Reservations 1-866-837-9520

Click buttons below to select check-in date, check-out date, rooms, adults and children.

August 2008 - September 2008

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Check-in: August 22, 2008
Check-out: August 23, 2008
Adults: 1
Children: 0

Reset

Legend: ☐ Available Date, ☐ Selected Date, ☐ Unavailable Date, ☐ Check-out Only

Choose a room below and availability will be displayed on the calendar.

Room Type	Rate
Superior South	US\$380.00
Superior West	US\$380.00
Intermediate East	US\$330.00
Intermediate West	US\$330.00
Standard	US\$260.00
Suite	US\$655.00

Located in the newly renovated South Tower, these exquisite rooms are tastefully decorated with contemporary furnishings. Each room has

Complete form, click "Finish Reservation" & complete your reservation.

Check-in: August 22, 2008
Check-out: August 23, 2008
Room Type: Superior South
Nights: 1
Adults: 1
Children: 0
Amount: US\$380.00

First Name:
Last Name:
Address:
City:
State/Province:
Country:
Postal Code:
Email:
Phone:
Fax:
Cardholder:
Card Number:
Expiration (MM/YY):
Arrival Information:
Comments/Requests:

Fields with an asterisk are required.
☒ Include me in future email campaigns

Finish Reservation

Home RACK Special Packages Travel Agents Groups Modify/Cancel Corporate Rates



Intuitive is Personal

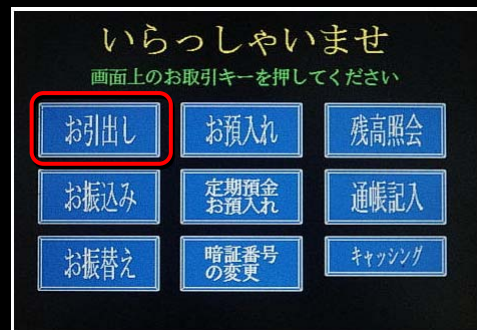
- What users currently know
- Their previous experiences

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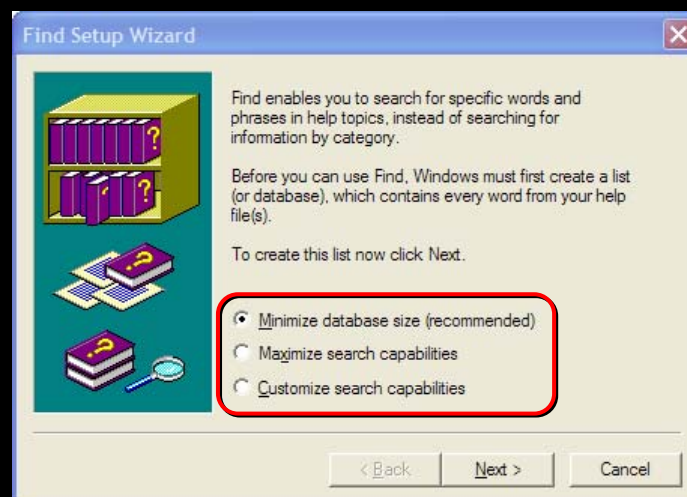


ATM Machine

How do you make a withdrawal?



Windows Help Setup Wizard



Intuitive Design is Evolutionary

- Designers first build technology
- Then they add features
- Then they focus on reducing complexity

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```

H:INTRO PAGE 1 LINE 9 COL 11          INSERT ON
< < <  M A I N  M E N U  > > >
--Cursor Movement--  | -Delete- | -Miscellaneous- | -Other Menus-
^S char left ^D char right | ^G char | ^I Tab ^B Reform | (from Main only)
^A word left ^F word right | DEL chr lf | ^V INSERT ON/OFF | ^J Help ^K Block
^E line up ^X line down | ^T word rt | ^L Find/Replce again | ^Q Quick ^P Print
--Scrolling--        | ^V line | RETURN End paragraph | ^O Onscreen
^Z line down ^W line up | | ^N Insert a RETURN |
^C screen up ^R screen down | | ^U Stop a command |
!-----!-----!-----!-----!-----!-----R

```

1. Introducing WordStar

WordStar is highly flexible and very visible. Watch the screens as you give commands, and information in various parts of the screen will guide you. You won't see all the information all the time, but it will be there when you need it.

WHERE YOU ARE

The seven WordStar menus are your greatest aids. They are like signposts at the top of your screen, showing you where you are.

1HELP 2INDENT 3SET LM 4SET RM 5UNDLIN 6BLDFCE 7BEGBLK 8ENDBLK 9BEGFIL 10ENDFIL

File Edit Search Layout Mark Tools Font Graphics Help (Press F3 for Help)

Dirk Makowski
www.makowski-berlin.de

Hier ist ein Bild!!

It's incredible!!

Wieder Schriftspieler!

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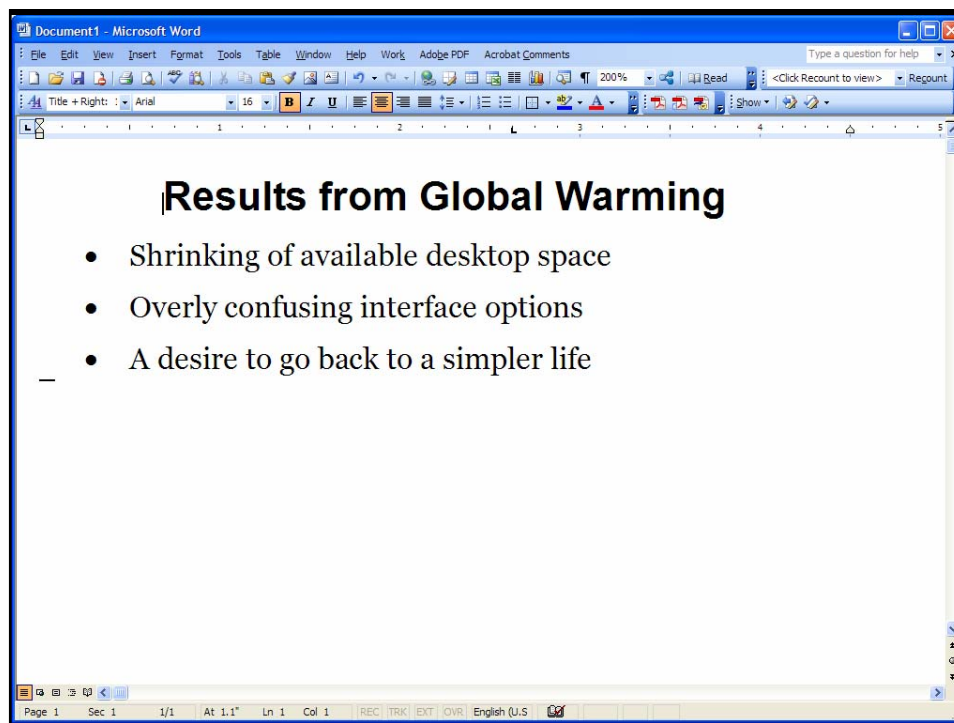
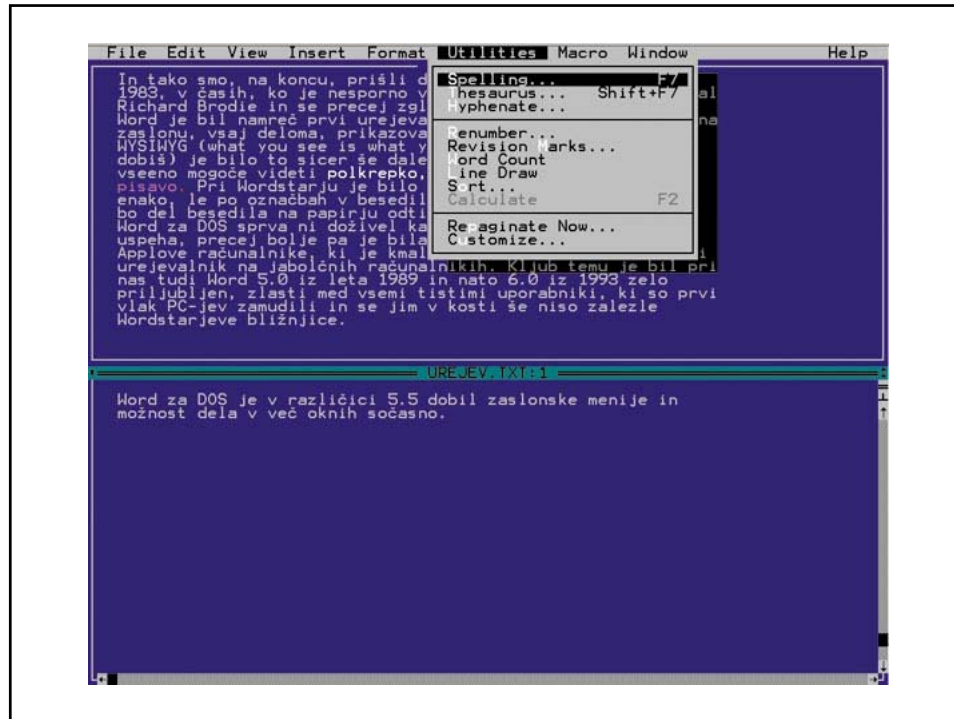
Strikout...

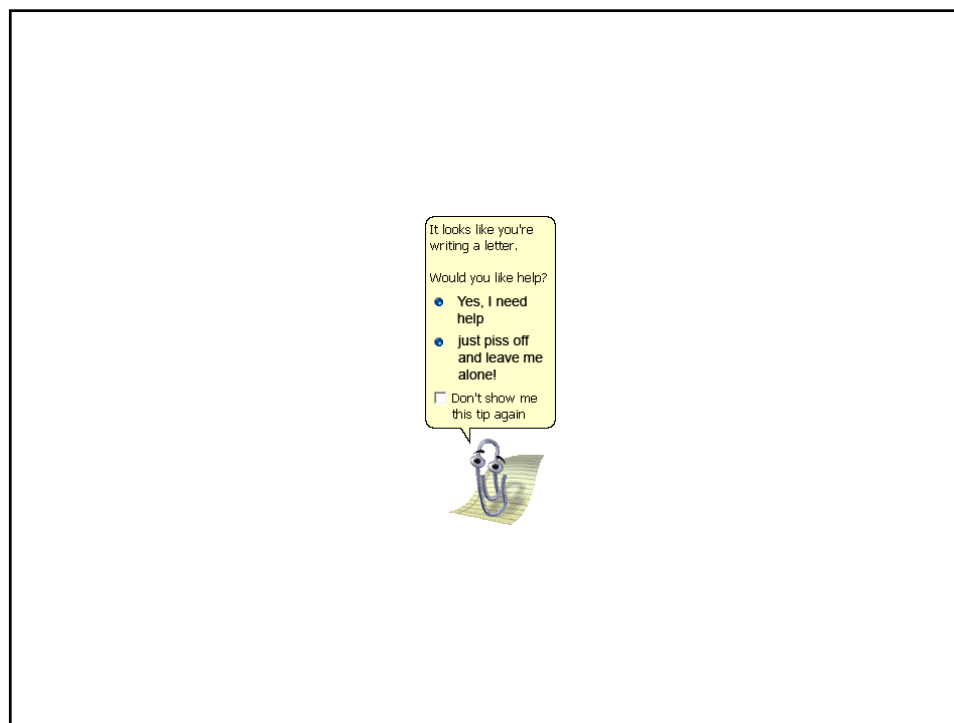
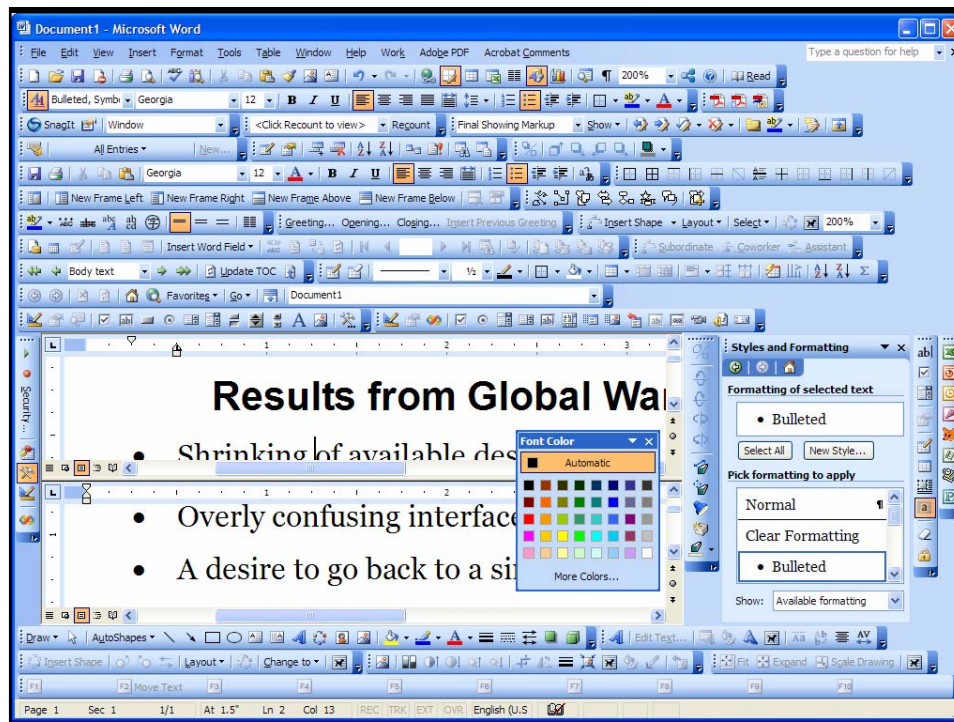
Kursiv

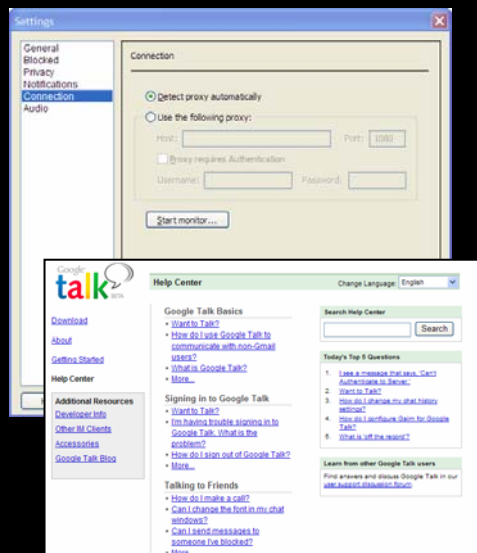
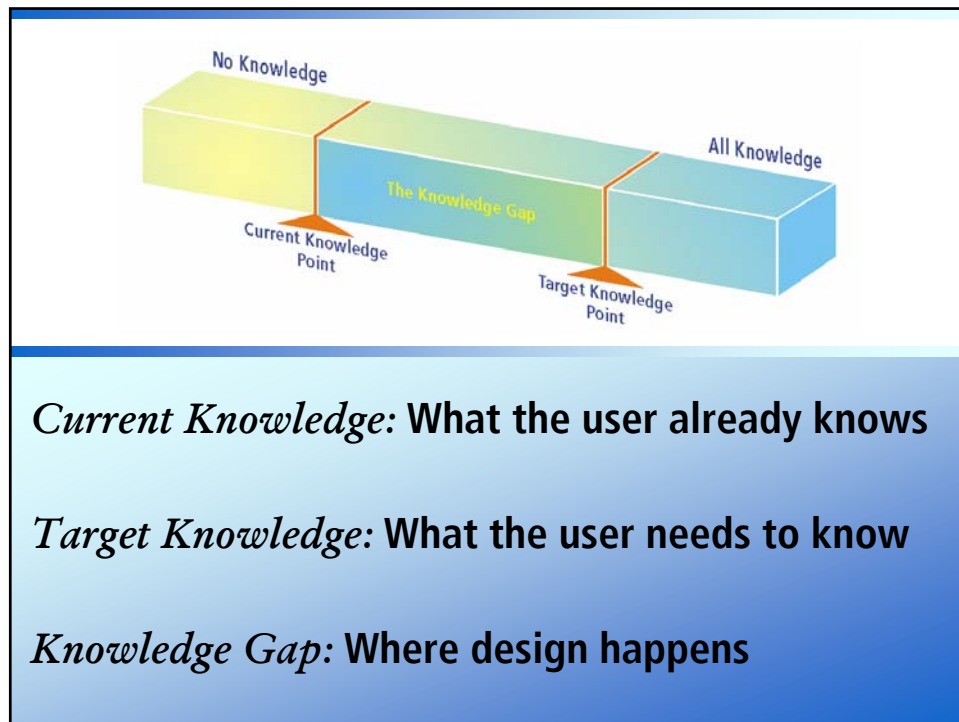
FIG 1

F:\...\OLDSTUFF\PROGSDOS\MP51\U1 Doc 1 Pg 1 Ln 2.75" Pos 1.35"

WordPerfect®											
Columns Left/Right	Shell	Spell	Screen	Move	Ctrl	Text In/Out	Tab Align	Footnote	Font	Ctrl	Merge/Sort
Columns	Thesaurus	Replace	Reveal Codes	Block	Alt	Mark Text	Flush Right	Columns/Table	Style	Alt	Graphics
Back to End of LpPg	Setup	*Search	*Switch	*Indent*	Shift	Date/Outline	Center	Print	Format	Shift	Merge Codes
Screen Back	Cancel	*Search	Help	*Indent		List	Bold	Exit	Underline		End Field
Next Page											Save
Margin Release											Retrieve
Print Screen Manual											Reveal Codes
Screen On/Off											Block
Word Left/Right											
	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
											F12



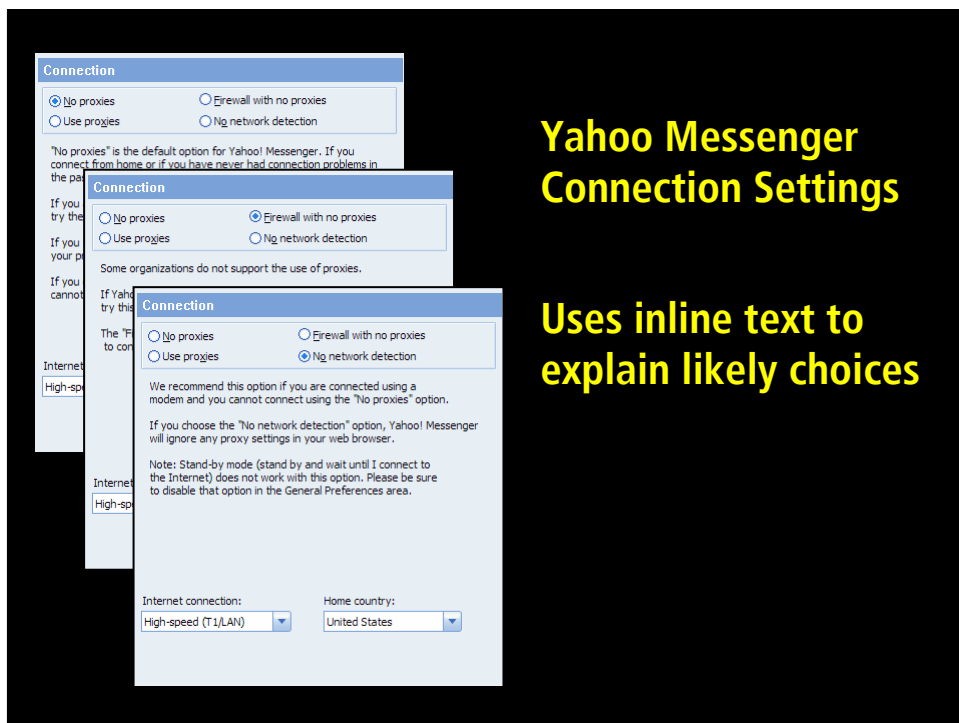
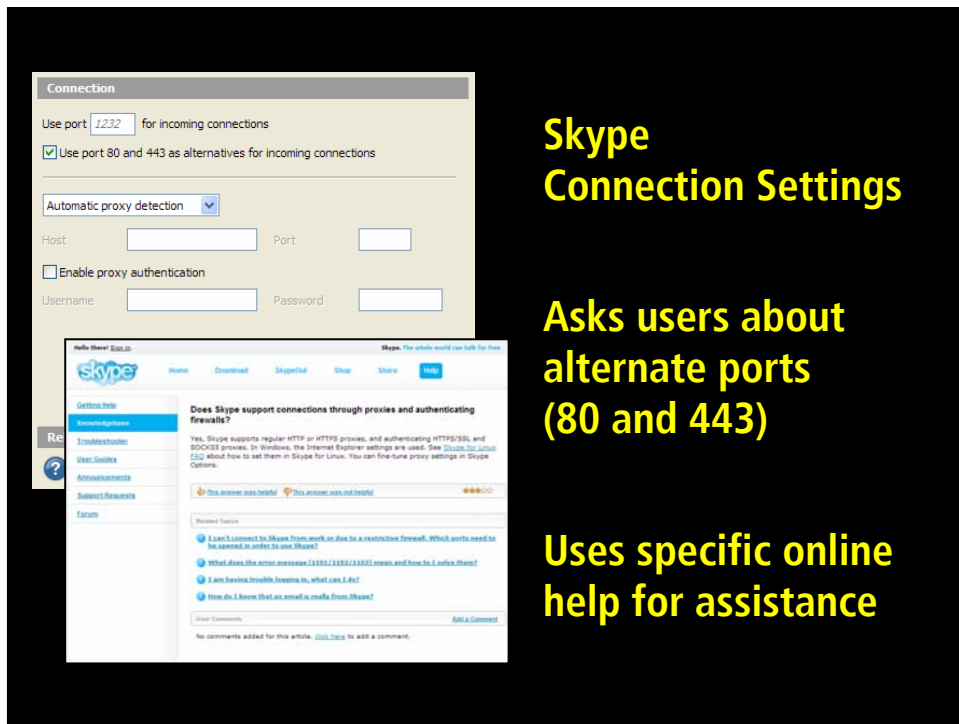




Google Talk Connection Settings

Assumes user understands proxies and firewall settings

Uses generic online help for assistance





AIM Connection Settings

Uses *Auto Configure*
wizard to deduce
proper settings

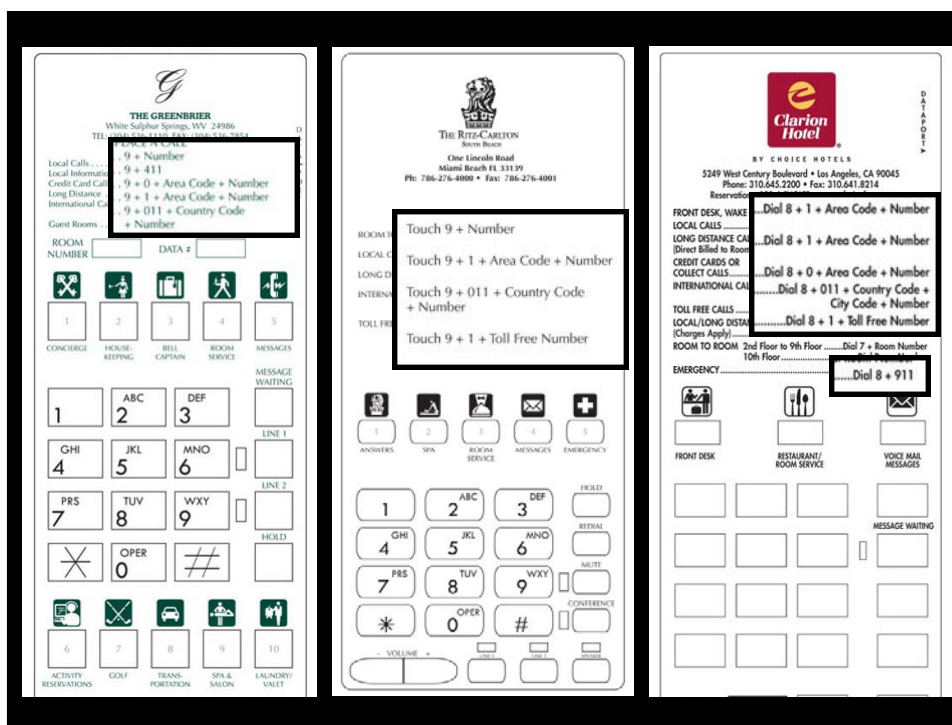
When is a Design Intuitive?

Either:

- Current = Target Knowledge
 - They are at the same point
 - The user already knows what to do

Or:

- The Knowledge Gap is very small
 - The user doesn't perceive they are learning



Two Types of Knowledge

- *Tool Knowledge*
 - Specific to the tool at hand
- *Domain Knowledge*
 - Independent of the tool
 - Specific to the domain

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Tool Knowledge

Login Name

User ID

(Must contain at least one letter and no spaces. May contain numbers.)

Password

[Safeguarding your account](#)

Repeat Password

User Name contains invalid characters. Valid characters include "A-z, 0-9, @, -, _ , and ." with a length between 9 and 50 characters.

Domain Knowledge

U.S. Environmental Protection Agency
Protecting human health, safeguarding the natural environment

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Current Issues

CLEAR SKIES
cleaner air, better health, brighter future

- [National Drinking Water Week May 4-10](#)
- [May is Science Month at EPA](#)
- [Springtime Tips](#)
- [Brownfields](#)
- [Voluntary Programs](#)
- [Ongoing Response to 9/11](#)

Top Stories

May 6 is World Asthma Day
May 6 is World Asthma Day and May is National Asthma Awareness Month. EPA is supporting hundreds of events across the country to help Americans learn more about environmental asthma triggers and ways to prevent asthma attacks.

EPA Announces \$15 Million for the Nation's Watersheds
May 2 - As part of a new Watershed Initiative, Administrator Christie Whitman announced nearly \$15 million in grants

Key Topics

- [Air](#)
- [Cleanup](#)
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- [Economics](#)
- [Ecosystems](#)
- [Emergencies](#)
- [Environmental Management](#)
- [Human Health](#)
- [Industry](#)
- [International Cooperation](#)
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FACILITY NAME/ADDRESS	FACILITY INFORMATION	Permitted Discharges to Water?	Toxic Releases Reported?	Hazardous Waste Handler?	Active or Archived Superfund Report?	Air Releases Reported?	BRS Reporter?
CULBERTSON CHIROPRACTIC CENTER 2106A GALLOWS RD VIENNA, VA 22180	View Facility Information	NO	NO	YES	NO	NO	NO
CUNNINGHAM PARK ELEMENTARY SCHOOL 1001 PARK STREET SOUTHEAST VIENNA, VA 22180	View Facility Information	NO	NO	YES	NO	NO	NO
DIPLOMAT CLEANERS 318 MAPLE AVENUE WEST VIENNA, VA 22180	View Facility Information	NO	NO	YES	NO	YES	NO

RCRAInfo

[HANDLER ID:](#) VAR000014019

Standard Industrial Classification:

There were no [SIC Codes](#) reported to EPA for this facility.

Handler/Facility Classification:

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND/OR INDUSTRIAL FURNACE	STORAGE	TREATMENT
Cond.Exempt Gen					

Additional Information can be obtained from Resource Conservation and Recovery Information [RCRAInfo](#) .

Resource Conservation and Recovery Act (RCRAInfo)

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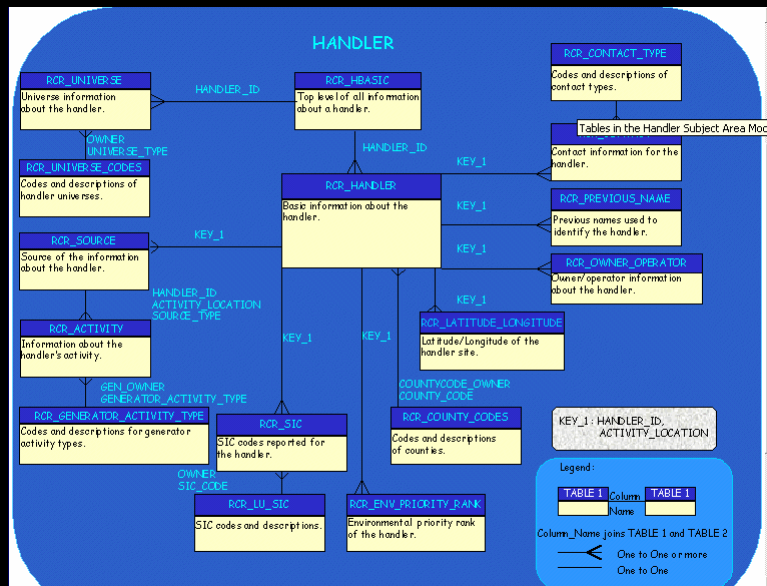
[EPA Home](#) > [Envirofacts](#) > RCRAInfo

Overview

 Hazardous waste information is contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. You may use the [Hazardous Waste Query](#) to determine identification and location data for specific hazardous waste handlers, and to find a wide range of information on treatment, storage, and disposal facilities regarding permit/closure status, compliance with Federal and State regulations, and cleanup activities. There is also information on related [Laws and regulations](#).

There is a graphic [model](#) of the RCRAInfo database and [table and column information](#) (metadata).

Unnecessary Knowledge



Techniques for Creating Intuitive Designs

- Field Studies
 - Help identify Current Knowledge
- Usability Studies
 - Help identify Target Knowledge and Gap
- Personas
- Patterns
 - Methods to communicate knowledge about users and solutions to entire team

What Makes a Design Seem Intuitive?

- Intuitive is personal
- Not every application needs to be intuitive
- Designers need to know where the users' current and target knowledge points are
 - For both tool and domain knowledge
- Traditional usability techniques help identify these points

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Making Things Intuitive

- Reduce Target Knowledge
 - Get as close to Current Knowledge as possible
- Provide clear clues to increase current knowledge
 - Without resorting to training or help

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From:
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☐ Compare surrounding airports ?

☒ Exact dates
 ☐ +/- 1 to 3 days
 ☐ Flexible dates

Depart:

Return:

Adults (18-64)
 Minors

One-way, Multi-destination

travelocity

Home | Flights | Hotels | Cars/Rail | Vacations | Cruises | Last Minute Deals

Search Flights | Top Deals | Web Fares | Low Fare Alert | Flight Status

Similar Cities

We found more than one location that matches the name you gave.

SPOKANE has the following close matches. Please select one.

☒ Spokane, WA (GEG)
 ☐ Spokane, WA (SFF)

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Select Your Outbound Flight

Boston, MA to Spokane, WA
 Departing Thu, Nov 11
 Returning Sun, Nov 14
 1 Adult

All fares are in U.S. dollars per person, including [taxes and fees](#) (subject to availability and routing). All times are local to each city. The following prices are for e-tickets. If your itinerary requires a paper ticket, [additional fees](#) may apply.

Departure	Arrival	Airline	Travel Time	Price
11:32am Boston, MA (BOS)	6:17pm Spokane, WA (GEG)	Northwest Airlines Flight 315 / 813	1 Stop Change planes in Minneapolis/St Paul, MN (MSP) Travel Time: 9hrs 45min	WEB FARE Roundtrip From \$402 Select
1:25pm Boston, MA (BOS)	6:17pm Spokane, WA (GEG)	Northwest Airlines Flight 711 / 813	1 Stop Change planes in Minneapolis/St Paul, MN	WEB FARE Roundtrip From \$402 Select
7:40am Boston, MA (BOS)	12:45pm Spokane, WA (GEG)	United Airlines Flight 57 / 1259		
11:00am Boston, MA (BOS)	6:33pm Spokane, WA (GEG)	United Airlines Flight 523 / 1259		

Flight Schedule Error

We were unable to find flights from Boston, MA (BOS) to Spokane, WA (SFF) on 11/11/2004.

Possible Causes:

- Limited flight schedules
- A smaller airport with limited service
- Limited operating days and hours

What you can do:

- Try a Nearby City with a larger airport.
- Try different departure dates or times in a new flight search
- View Flight Schedules to determine better trip options for you.
- Let us book it for you! Call 1-888-TRAVELOCITY (1-888-872-8356) we will be happy to help!

Fare details for QQN0	
BK CODE	Q -
PENALTY	CANCELLATIONS TICKET IS NON-REFUNDABLE. NOTE - I. BEFORE DEPARTURE - IF THE RESERVATION IS CANCELED ON/BEFORE TICKETED DEPARTURE DATE / THE VALUE OF THE ORIGINAL / NONREFUNDABLE TICKET MINUS AN ADMINISTRATION FEE WHICH WILL BE DEDUCTED AT THE TIME THE ITINERARY IS CANCELLED / MAY BE APPLIED FOR FUTURE TRAVEL ON US AIRWAYS /US/ OR AMERICA WEST /HP/ WHEN PURCHASING A NEW TICKET ON ANOTHER US/HP FLIGHT. ALL TRAVEL MUST BE COMPLETED WITHIN ONE YEAR OF ORIGINAL TICKET ISSUE. ANY SUCH FUTURE TRAVEL TICKET IS A SEPERATE TICKET PURCHASE / AND IS NOT A CONTINUATION / EXTENSION OR SUBSTITUTION OF THE UNUSED TICKET. SUCH ORIGINAL / NONREFUNDABLE TICKETS HAVE NO CASH VALUE / NO OTHER TRADE IN OR EXCHANGE VALUE / AND MAY NOT BE TRANSFERRED TO ANOTHER PERSON. US/HP MAY IN THERE DISCRETION DETERMINE THE AMOUNT OF THE ADMINISTRATION FEE WHICH SHALL NOT BE LESS THAN USD 100.00 AND MAY IMPOSE OTHER TERMS AND CONDITIONS THEREON. B. AFTER DEPARTURE IF ANY PART OF THE TICKET IS UNUSED AFTER TICKETED DEPARTURE DATE IT HAS NO VALUE. CHANGES CHARGE USD 100.00 FOR REISSUE. NOTE - I. BEFORE DEPARTURE -- ITINERARIES MAY BE REBOOKED UP TO ONE YEAR PROVIDED PSGR CANCELS THE TICKETED FLIGHT RESERVATION ON/BEFORE TICKETED DEPARTURE DATE ALL TRAVEL MUST BE COMPLETED WITHIN ONE YEAR OF ORIGINAL TICKETED DATE. IF TICKETED FLIGHT RESERVATION IS NOT CANCELLED ON/BEFORE TICKETED DEPARTURE DATE REBOOKING IS NOT PERMITTED AND THE TICKET HAS NO VALUE. --- CHANGES TO THE TICKET - THE ENTIRE TICKET MUST BE REPRICED WITH CURRENT FARES. ALL PROVISIONS OF THE NEW FARE I.E. ADV RSVN/MIN/MAX STAY ETC MUST BE MET. ANY DIFFERENCE IN FARES PLUS ANY FEES MUST BE COLLECTED. NO REFUND PERMITTED FOR A DECREASE IN FARE. --- II. AFTER DEPARTURE-IF TICKETED FLIGHT RESERVATION IS NOT CHANGED ON/BEFORE TICKETED DEPARTURE DATE REBOOKING IS NOT PERMITTED AND THE TICKET HAS NO VALUE. -- AFTER DEPARTURE--WHEN THERE IS NO CHANGE TO ORIGIN/DESTINATION OR STOPOVERS. A. CHANGES MAY BE MADE ON/BEFORE TICKETED DEPARTURE DATE OF EACH FLIGHT FOR ANY FEES WITHOUT REGARD TO ADVANCE RSVN PROVIDED THE CHANGE MEETS ALL OTHER FARE RULES. --- B. WHEN THE CHANGE VIOLATES THE TICKETED FARE RULES THE FOLLOWING OPTIONS ARE AVAILABLE AND THE LOWEST SOLUTION WILL APPLY.

Fare rules	
Related links: > Saved searches	0. APPLICATION AND OTHER CONDITIONS RULE - 775/4875 UNLESS OTHERWISE SPECIFIED INTERNET EXCURSION SALES APPLICATION CLASS OF SERVICE THESE FARES APPLY FOR ECONOMY/COACH CLASS SERVICE. 5. ADVANCE RES/TICKETING FOR -72 TYPE FARES RESERVATIONS FOR ALL SECTORS ARE REQUIRED AT LEAST 7 DAYS BEFORE DEPARTURE. STANDBY PERMITTED FOR EARLIER/LATER SAME DAY FLIGHTS OTHERWISE STANDBY NOT PERMITTED. TICKETING MUST BE COMPLETED WITHIN 1 DAY AFTER RESERVATIONS ARE MADE OR AT LEAST 7 DAYS BEFORE DEPARTURE WHICHEVER IS EARLIER. NOTE - THE TKTG AFTER RES REQ WILL NOT APPL WHEN FARES ARE COMB W/OTHER FARES TO CONST THRU INTL TRANS T/F PTS OUTSIDE THE US/CA/MX/BM/BS/WEST INDIES PROVIDED AT LEAST ONE INTERNATIONAL SEGMENT OUTSIDE OF THIS AREA IS VIA UA. PNGRS HOLDING CONFIRMED RESERVATIONS AND TKTS MAY STANDBY FOR EARLIER/LATER SAME-DAY FLT. 6. MINIMUM STAY FOR -E72NAL TYPE FARES WHEN DEPARTURE FROM FARE ORIGIN IS SUN THROUGH WED THEN TRAVEL FROM LAST STOPOVER MUST COMMENCE NO EARLIER THAN 2 DAYS AFTER DEPARTURE FROM FARE ORIGIN OR - WHEN DEPARTURE FROM FARE ORIGIN IS THU THROUGH FRI THEN TRAVEL FROM LAST STOPOVER MUST COMMENCE NO EARLIER THAN THE FIRST SAT AFTER DEPARTURE FROM FARE ORIGIN OR - WHEN DEPARTURE FROM FARE ORIGIN IS SAT THEN TRAVEL

Flight Applications

NO FLIGHT RESTRICTIONS APPLY.

[Return to top](#)

Advance reservations/ticketing

RES MUST BE MADE NO LATER THAN 7 DAYS BEFORE DPTR FROM ORIGIN. TKT MUST BE PURCHASED NO LATER THAN 7 DAYS BEFORE DPTR FROM ORIGIN OR 1 DAY AFTER RES IS MADE, WHICHEVER COMES FIRST. SGMTS USING THIS RULE MUST MEET ADV TKTG. SGMTS USING THIS RULE MUST BE CONFIRMED.

[Return to top](#)

Combinability

CONDITIONS APPLICABLE TO CIRCLE TRIP/SINGLE OPEN JAW - -MAY BE COMBINED WITH ANY ONE WAY/ROUND TRIP FARE GOVERNED BY AACBR RULE 5999/7999 AND AA8SR RULE 5999/7000/7920/7930/7940/7998/7999 AND ANY RULE IN CP/DFR/PRW/PCR/VPDR VIA AA OR VIA ANY AA JOINT CARRIER COMBINATION. -WHEN COMBINED WITH LESSER OR NON-PENALTY AA FARES, APPEND NR TO THE FARE BASIS CODES OF THE LESSER OR NON-PENALTY FARE IN THE COMBINATION. -MOST RESTRICTIVE CONDITIONS APPLY. NOTE: WHEN COMBINED WITH OTHER FARES TO FORM ROUND/ CIRCLE/OPEN JAW TRIPS THE MOST RESTRICTIVE CONDITIONS APPLY. THESE INCLUDE MINIMUM/MAXIMUM STAY /RESERVATION/TICKETING REQUIREMENTS/STOPOVER PROVISIONS/AND CANCELLATION/CHANGE PENALTIES/ SERVICE CHARGES OR COMBINATION PROVISIONS. WHEN TWO STOPOVERS ARE MADE IF NO COMBINABLE FARE IS AVAILABLE ON THE SHORTEST SECTOR FLOWN ANY APPLICABLE ONE WAY FARE MAY BE USED END-ON-END AND WILL NOT TAKE ON THE CONDITIONS OF THE MOST RESTRICTIVE FARE. ADDITIONAL CONDITIONS APPLY CIRCLE TRIP - -PERMITTED. -MAXIMUM OF 2 STOPOVERS PERMITTED. OPEN JAW - -SINGLE OPEN JAW PERMITTED AT EITHER ORIGIN OR DESTINATION. -THE MILEAGE OF THE SHORTEST FLOWN SECTOR MUST BE EQUAL TO/GREATER THAN THE MILEAGE BETWEEN THE POINTS OF THE OPEN JAW. -THE TWO POINTS OF AN OPEN JAW COUNT AS TWO STOPOVERS. END-ON-END - -PERMITTED. TRAVEL MUST BE VIA THE FARE COMBINATION POINT. CO-TERMINALS - -THE FOLLOWING GROUPS OF CITIES ARE CONSIDERED TO BE THE SAME POINT BUR - SNA - LAX - ONT - LGB, EWR - HPN - ISP - NYC, OAK - SFO - SJC, BWI - WAS, FLL - MIA.

[Return to top](#)

Transfers

UNLIMITED TRANSFERS AS PERMITTED ON THE ROUTING.

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Stopovers

NO ENROUTE STOPOVERS PERMITTED. A STOPOVER OCCURS WHEN THE PASSENGER DOES NOT DEPART AN INTERMEDIATE POINT WITHIN 4 HOURS.

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Southwest Airlines Fares (B7NR)

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- Roundtrip travel required.
- Seats are limited.
- Seven day advance purchase.
- Ticket must be purchased within one day of reservation.
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- Fares do not include airport-assessed passenger facility charges (PFC) of up to \$18 and government-imposed September 11th Security Fee of up to \$10 roundtrip.
- Fares are nonrefundable, but (except for tickets purchased through our Group Tickets Program) may be applied toward future travel on Southwest Airlines.
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- Standby travel requires an upgrade to the full unrestricted fare.

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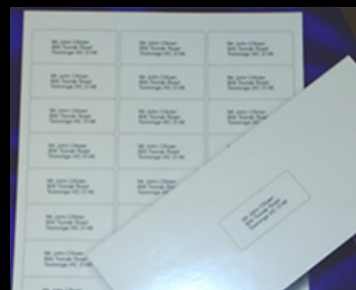
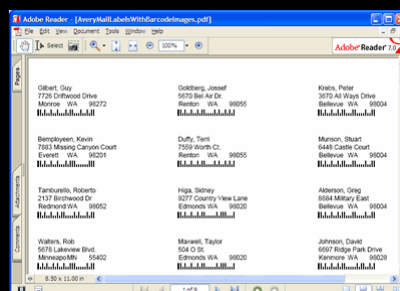
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The Magic of Wizards

- Wizards, Auditors, and Calculators reduce target knowledge
 - Supplant necessary knowledge with technology
- Hides underlying knowledge from users
 - Users have to accept results as is
 - Potential for *Garbage In, Garbage Out*

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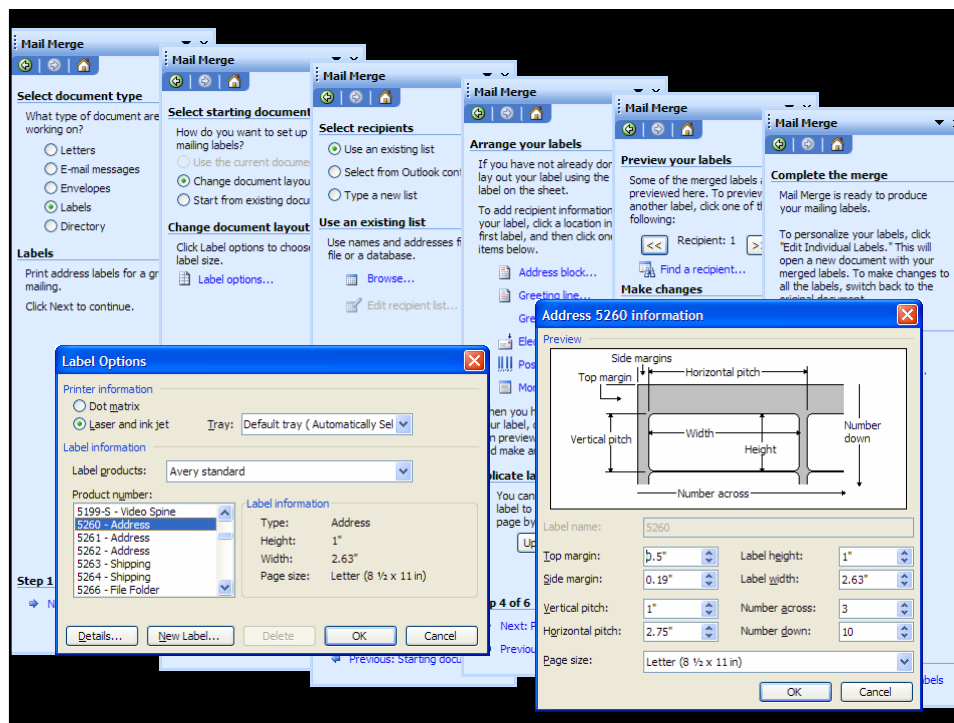
Name	Address	City
A JAMES ANTONINI II		HAYWARD
GORELICK BARRY P	22274 MAIN ST	HAYWARD
FRANKLIN EUGENE T ATTORNEY AT LAW	22762 MAIN ST	HAYWARD
A BELES	713 A ST	HAYWARD
FISHER & HARDIN	22693 HESPERIAN BLVD STE 270	HAYWARD
GOMES TIM LAW OFFICES		HAYWARD
AKANA & YEE	22693 HESPERIAN BLVD	HAYWARD
FURTADO ROBERT A	22712 FOOTHILL BLVD	HAYWARD
GILLIN JACOBSON ELLIS & LARSEN ATTORNEYS AT LAW	24072 MYRTLE ST	HAYWARD
BRIAN J SERVATIUS ATTORNEY	1276 A ST	HAYWARD
GOODMAN LOUIS J ATTORNEY AT LAW	1290 B ST STE 307	HAYWARD
DRESNICK PAUL A PROFESSIONAL CORPORATION	225 W WINTON AVE STE 125	HAYWARD
DUGGAN DANIEL A JR A PROFESSIONAL LAW CORPORATION	1325 B ST	HAYWARD
BAKER RAYMOND N	770 A ST STE 304	HAYWARD
SURE SERVE	183 St. Andrews St.	HAYWARD
LAOPRIVIC MARTIN I	22774 MAIN ST	HAYWARD



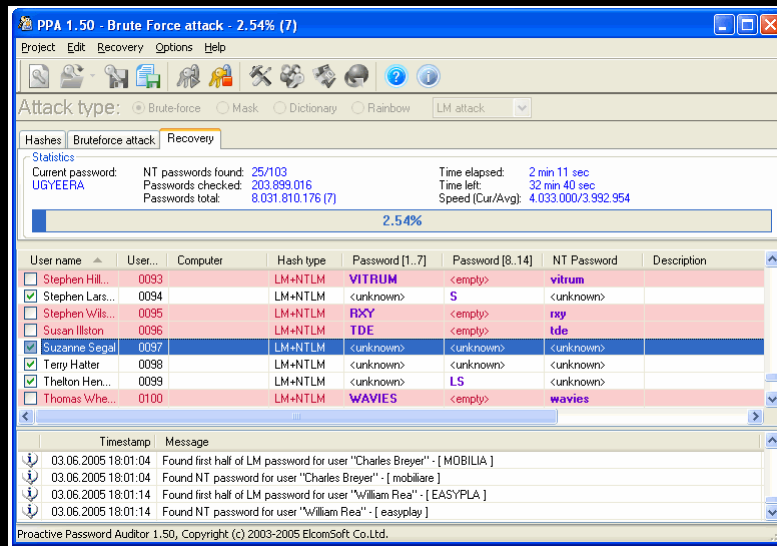
Mail Merge Required Knowledge

- Create address table
 - Set up database
 - Import CSV data
 - Create row 1 headers
 - Sort data by zip+4 designation
- Create merge template
 - Layout table to label dimensions
 - Insert fields
 - Put in bar code capability
 - Insert *next field* code
 - Propagate formatting across entire label page
- Connect address table to merge template
 - Connect data table to merge template
 - Identify field codes
 - Map columns to field codes
- Validate layout
 - Run practice labels
- Manually select rows for labels
 - Run merge function
 - Inspect proof document
 - Install labels in printer manual feed
 - Print labels on stock

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ElcomSoft Security Auditor



The Magic of Wizards

- Must be within the Gap
 - When outside the gap, they don't help users achieve their goal
 - Become patronizing or incomprehensible

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To begin your research, enter a symbol above, then click Go.

How to Research a Stock

When considering the purchase of a stock, investors should find answers to five key questions.

Fundamentals What is the company's business, is it financially sound -- and is it growing?

Price History How much have other investors been willing to pay for the stock in the past?

Price Target How much are investors likely to pay for the stock in the future?

Catalysts What catalysts will change investors' perceptions of the stock in the future?

Comparison How does the stock compare to others in its industry?

How fast is the company growing?

- **APPLE COMPUTER INC** one-year sales growth: 50.10%. Difference from the average for the Personal Computer Systems group: 37.60 pct. pts.
- **APPLE COMPUTER INC** one-year income growth: 66.70%.

Sales & Income Growth (past 12 months)	Company	Industry
Sales Growth	50.10%	12.50%
Income Growth	66.70%	-4.80%

How profitable is the company?

Investors prefer companies that increase profit margins -- the percentage of sales that they keep -- every year. This is accomplished either by lowering expenses or raising prices. Look for companies that consistently find ways to squeeze more profits out of sales than their peers.

- **APPLE COMPUTER INC** one-year net profit margin: 10.0%. Difference from the company's 5-year average net profit margin: 5.7 pct. pts. Difference from the average for the Personal Computer Systems group: 3.6 pct. pts.

Net profit margins (%)	Company	Industry
Company	10.0%	
Company 5-Yr Avg.	4.3%	
Industry	6.4%	

How is the company's financial health?

The debt/equity ratio shows how much a firm has borrowed long-term as a percentage of its stock equity. The lower, the better.

- **APPLE COMPUTER INC** debt/equity ratio: NA. Average debt/equity ratio for the Personal Computer Systems group: 0.07.

	Company	Industry
Debt/equity ratio	NA	0.07

What's the best guess for the stock price in 1-2 years?

Investors fix targets for most stocks by estimating future earnings per share and then applying a price-to-earnings "multiple", also known as the P/E ratio. Companies with the most consistent earnings history or strongest growth prospects receive the highest P/E multiples. We calculate price targets for the current and next fiscal year by applying the stock's current multiple to the average professional analyst's estimate.

Valuation using APPLE COMPUTER INC's current multiple (P/E):

Fiscal Year	Est Low/High Price Range	Avg. Est. Price	% Change for Annual
5/2006	\$54.21-\$59.23	\$57.27	3.37%
5/2007	\$64.77-\$80.62	\$71.72	28.47%

APPLE COMPUTER INC current price: \$5.40
 APPLE COMPUTER INC current multiple (P/E): 27.60

APPLE COMPUTER INC average 5/2006 estimate: 2.06
 APPLE COMPUTER INC low 5/2006 estimate: 1.95
 APPLE COMPUTER INC high 5/2006 estimate: 2.12
 APPLE COMPUTER INC average 5/2007 estimate: 2.58
 APPLE COMPUTER INC low 5/2007 estimate: 2.33
 APPLE COMPUTER INC high 5/2007 estimate: 2.90

MSN Money Stock Research Wizard

The 2006 Quick Tax Calculator

Get a quick estimate of your refund or tax liability. [printer friendly](#)

YOUR ENTRIES

Filing Status:

Dependents:

Adjusted Gross Income:

Itemized deductions:

Payments:

[Calculate Now](#)

TAX ESTIMATE

Your refund will be \$11929

DETAILS AND ADVICE

Details

Income: \$120000
 Greater of [Itemized](#) or [Standard Deduction](#): \$15000
 Personal exemptions: \$13200
 Taxable income: \$91800
 Tax: \$16071
 Your refund will be \$11929

Advice

- If you have enough eligible deductions to exceed your standard deduction, you will be able to save money on your taxes. Examples of eligible expenses are mortgage interest, real estate taxes and personal property taxes, charitable contributions, and, subject to certain limits, medical expenses and employment-related expenses. If you normally take a standard deduction, consider "bunching" your deductions; that is, paying deductible expenses in 2006 that you ordinarily would not pay until 2007. With careful timing, bunching may be just enough to allow you to alternate between itemizing deductions one year and claiming the standard deduction the next year. Caution: You can bunch only costs - medical expenses, employee expenses, and accrued property taxes, for example - that actually become due during 2006.

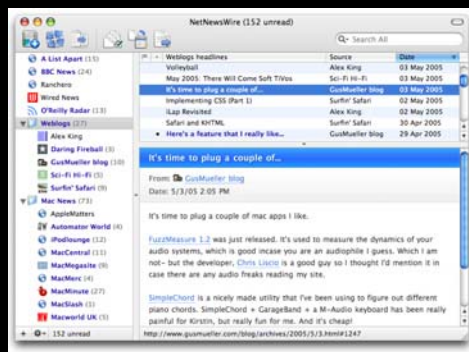
H&R Block Quick Tax Calculator

Reducing Target Knowledge

- Necessary to make design seem intuitive
- Has to match the users' goals
- Simplifying is the most common technique
 - Ensuring every piece of knowledge is truly necessary
- Wizards, Auditors, and Calculators are sophisticated techniques
 - Expensive to implement

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Apple Mail



Yesterday	11:51 AM
Yesterday	10:54 AM
Yesterday	10:23 AM
Aug 8, 2006	6:16 PM
Aug 8, 2006	4:16 PM
Aug 8, 2006	3:32 PM
Aug 8, 2006	2:44 PM

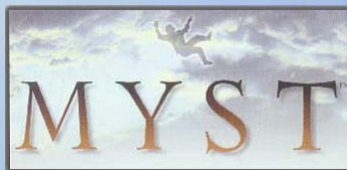
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Yesterday	10:54 AM
Yesterday	10:23 AM
8/8/06	6:16 PM
8/8/06	4:16 PM
8/8/06	3:32 PM
8/8/06	2:44 PM

Yesterday	
Yesterday	
Yesterday	
Aug 8, 2006	
Aug 8, 2006	
Aug 8, 2006	
Aug 8, 2006	

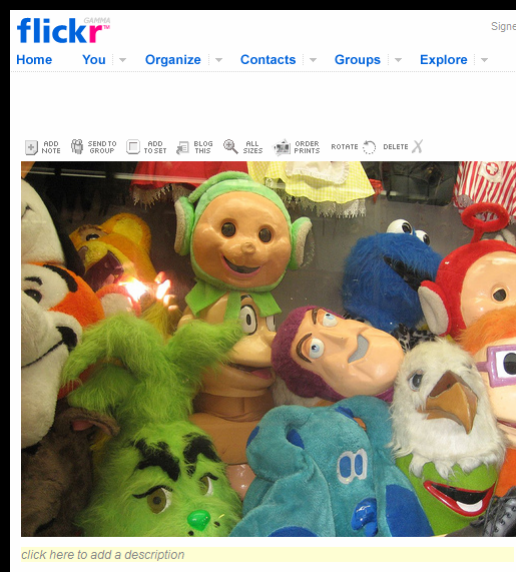
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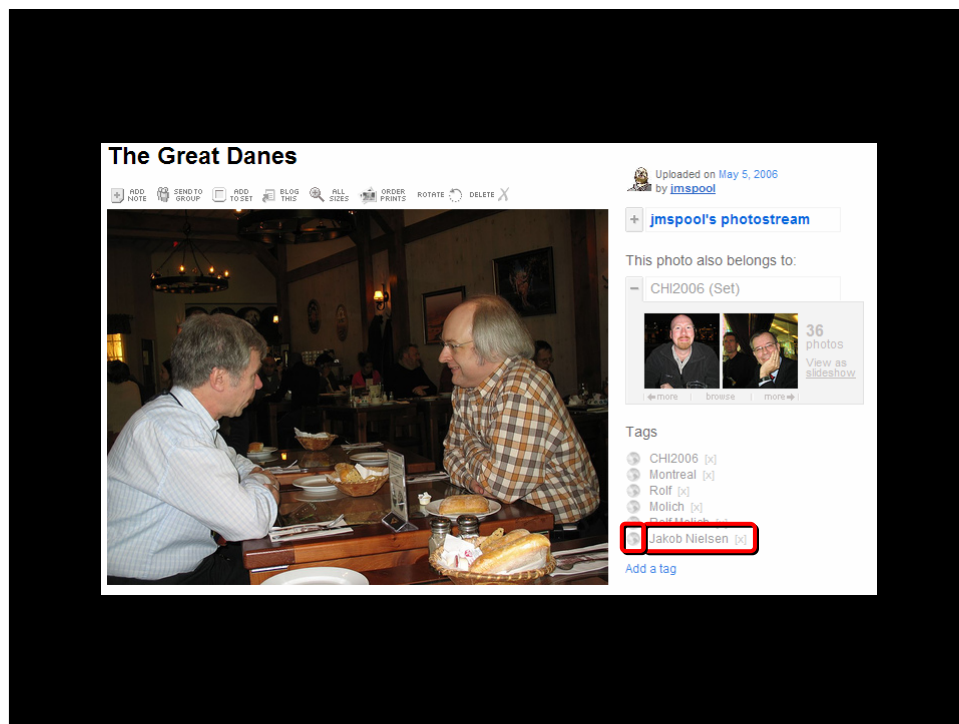
Exploratory Discoverability

- New trend in design
 - Intended to make interface more delightful
- Popular with AJAX and RIA Support
- Makes interface feel like a game



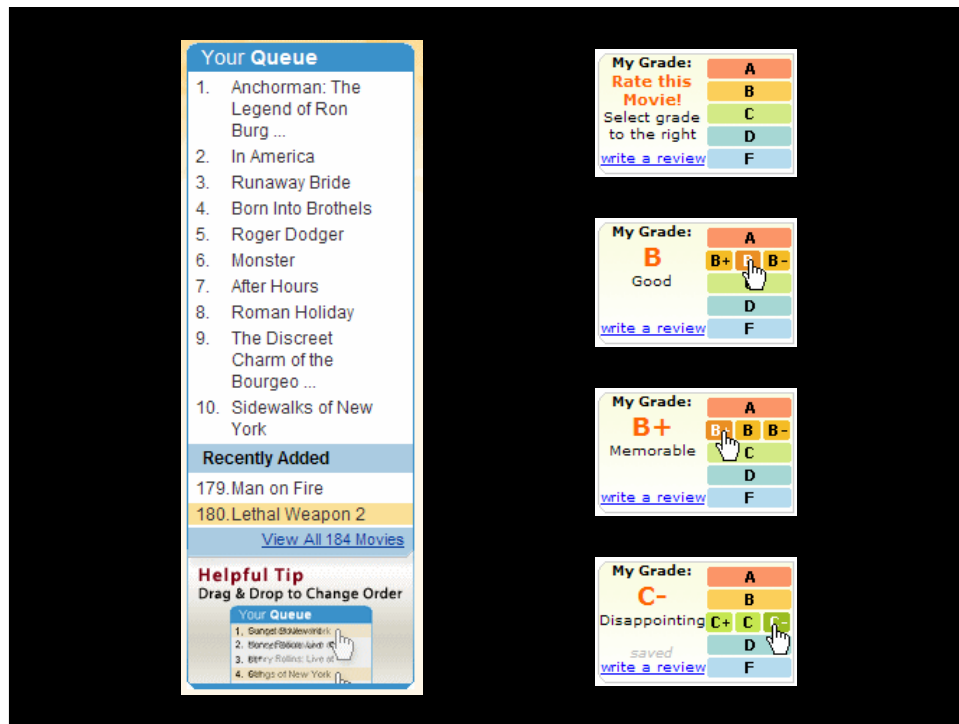
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Exploratory Discoverability

- Users may not perceive as *fun*
 - If lack of clues prevents productivity
- Give clues whenever possible
 - Careful design can reduce/eliminate clutter



What Makes a Design Seem Intuitive?

- Intuitive is personal to the user
 - Based on their current knowledge and the required target knowledge
- Intuitive happens when the gap is minimized
- Just because something seems intuitive to you doesn't mean it will seem intuitive to your user
 - Study your users to discover what is intuitive to them