Pleased to be here. We also have a special guest today. Please also welcome Jackie Mommsen of the U.S. Census Bureau. Jackie is a Program Analyst on the Data Access and Dissemination Systems’ (DADS’) Requirements and Stakeholder Relations Team.

Surveys: How many of you consider yourselves proficient with the legacy AFF interface? How many of you have never used American FactFinder before?

(Those of you who have never used it may actually be better off than those who used the old one frequently.)
Good Things

- Have to know less to find data
- Table manipulation available online
- Can now map *any* (single) variable

Don’t have to select survey or summary file to access data – don’t have to know in which file to find a given topic
Don’t (always) have to download the data to create a customized table
Not restricted to a short list of subjects like in the legacy AFF
So users unfamiliar with Census surveys won’t necessarily know there’s a difference between geographies used by the decennial census and the ACS, or by the 2000 decennial and the 2010 decennial. They certainly won’t understand the differences in methodology between surveys or the fact that data coming from different surveys is not comparable. And since system allows access to data bsd on each choice mk, likely won’t be clear to inexperienced users why they can get to, say, zip codes for Business Pattern data but only ZCTAs for census data.

Remember that AFF was develope’d very recently to serve data that’s been develope’d in separate programs over many decades. Several data manipulation features only show up in certain places, but partly a matter of how AFF receives the data from the programs that compile them.

Easy to get frustrated.

Seems even slower than old system at best times of day.
Okay, just in case the wireless access is funky, I’ve captured a series of screenshots to show you how this works. Toward the end of the session, I’ll give you exercises to try on your own.

Traditional address is factfinder.census.gov (no www); new is factfinder2.census.gov.
Note the browsers AFF is best with – limited ability to test with other browsers
Give Feedback! Ask questions!
Note Glossary for unknown terms but general – may need to consult other Techn
Documentation (TD) for terms specific to a certain survey
Can switch between English and Spanish but have heard Spanish only really works for
Puerto Rico data
Can do address search to identify census geo’s (tends to work best with st addr’s) – current
as of 2009 compilation of Master Address File (confirm w/ Jackie)
Have recently added link on main page to Reference Maps – also built into geography
selection filter. Had some trouble with this feature going to the geo I selected.
Can start with Quick Start or
The bars on the left—give you a little more flexibility in searching but you end up in the same place.
Can start with any of these options
Although Topics listed first, start with Geographies (geo choices clear table choices [but not Topic choices]) but remember that choices you make affect info you can get to in other sections.

Race & Ethnic groups useful for specifying groups oth th trad'l six>>i.e., SF2 Industry Codes, of course, for economic data but also h/ Business and Industry Topic

when you click on anything....
...bumps you to the Search screen.

Geography opens pseudo-pop-up window—can’t reposition it

Note that there are tabs across the top – take these out of order
Map gives you access to a reference map
Address is the same Address Search from the Main page
default is List, you can select the geographic type you want like the old AFF (this is a relatively recent change; previously Name was the default).
Note that this is not a scrolling list—instead, very short, only most popular. If need any other geo, switch to...
...Name tab.
Notice, again, default is to show most requested geo’s rather than all but can change that
(Responsive programming!)
Make selections by checking boxes
But then have to click Add button to capture selections. Live, will see selections “fly” to box.
Can also do keyword search here (auto-suggests as you type)
And, still have Geo within Geo but have to search for them
Use exact language: counties “within” north carolina, not “in”
**Anyone know how many counties in NC? [100]
>>Limited to 250 geographies at once but a geo within geo like this counts as 1.
One caveat: searches are cumulative. Here, I searched for North Carolina and added it; then searched for Orange County and added it; but when I searched for Chapel Hill, the town, I got this Economic Place, not the town. The filter thought I was trying to search within the other two geographies. When I cleared those filters within the Geogr pop-up and searched again for Chapel Hill, it did find it. Now, this seems like a glitch to me because Chapel Hill town is within those larger geographies. So I’m reporting it in the feedback. But just be prepared to think critically about your results and pay attention to the Geographic Type column. An Economic Place is not the same as a town, is not the same as a township. Here’s a place where the I (About) icon isn’t very helpful, nor the Glossary. With I icon, could compare Land Area to see how different two geographies are but neither that nor Glossary gets you to actual definitions. Have to dive into Estimates program technical documentation to find that.

Also, every choice make in AFF affects what other data you can get to. If search for Raleigh-Cary metro area, will only be able to get 2010 data because that MSA changed from Raleigh-Durham-Chapel Hill MSA in 2003.

(Kinda hard to get to old geo’s. Will talk about that at the end.)

When finished, click the X to close the window.
Your Selections box shows what you’ve chosen so far. Can clear this with Clear All link or with orange Xs for single item(s).

(All searches are again cumulative. You have to clear previous selections to do a new search. Also, system has a 30-min timeout so if you do a search one day and come back another day for something else, the system may give you a timeout message when you go to the AFF home page.)

When click on Topics box, get another pseudo-pop-up with subtopics – drill to what you want.

Also has option to Include Archived Products – misleading. Might think would let you search, say, the 1990 DC data but essentially only gives you a link to the ftp site for the archived data sets. Sort of pointless anyway since now have better access to the ftp site from the Main page.

**Rules for archiving in slide at end**
If you expand the Topic People, you’ll get lots of sub-topics—easy to drill down to specific subjects.

Some foibles:
- Pop chng Topic = migration (people mving fr one state/county to another) but just gvs link to ftp site since site dsn’t support flow-type data
- Income topic ds not incl Poverty - have to go to Poverty topic

Note that getting results from different years and surveys in Results list.

So notice, no choosing which survey or summary file you want – can still do that; will see that next.

Likewise...
...can expand Year, Product Type for specialized tables like GCTs, Data Profiles, or Detailed Tables
Expand Program for to choose a particular survey
Dataset more specific, can choose a particular year and sub-file, like decennial 2010 SF2 or ACS 5-yr estimates for 2009.

Can use these options to really drill to what you want—of course, easier for experienced users but as general rule, start with what need most, esp’ly if historical. Sys is oriented toward current data/geos, maybe slightly more toward people data than economic data.
Okay, I drilled down to Marital Status. Clicking on Marital Status adds that to my selections. Gonna add DC 2000 SF3 in Dataset. (Again have to click Close X to close pop-up.)
See selections here.
Let’s look at the results list. Besides the name of the table, tells you which Dataset (survey and summary file) in next column
Last column, About, has information symbol—clicking here will give you the table shell and often, links to TD (not in Geographies window, though). In the ID column, these identifiers can help you figure out what you want if you’re a little familiar with what they are.
Easy to overlook the first column, ID, but can use these—again, easier for experienced users.
Table IDs

- **DP** = data profile
- **QT** = Quick Table (lmtd geo’s)
- **GCT** = Geographic Comparison Table (lmtd geo’s)
- **P** = population and **H** = housing — decennial; dtld
- **B** = base and **C** = compressed — ACS; dtld tbls
- Three relatively new from ACS:
  - **CP** = Comparison Profile (over several years) and
  - **S** = Selected Population Profiles (different variable groupings:
    CHARACTERISTICS OF PEOPLE WITH A MARITAL EVENT IN THE LAST 12 MONTHS, Households & Families, Marital Status, etc.); and also Subject Table (similar to selected pop profile)

Selectable as >>Product Type

Last two include variety of variables around given topic
In decennial census tables, **PCT** and **HCT** indicate person or housing tables, respectively, that only go down to the Census Tract level.

- **Tables ending in PR** are for Puerto Rico.

- **Tables with the same number but ending in a letter—A, B, C...H, I**—are tables by race & ethnicity.
Notice options at the top of this screen. Talk more about View and Download in a sec. Compare let’s you quickly open the I (About) screens for multiple tables at once so you can compare the table shells. Clear All, of course, clears your table selections.
Quirky Thing about the Results List

- Select and Download from this page if you need to pull multiple tables
  - Limit of **10 tables** at a time (performance issue; if need more, use the FTP download)
  - *no warning until click Download!*

- Click View if you want to manipulate a single table online

Can view multiple tables but have to “page through” results.
So think of View here as “View One Table”. Technically this is your Results List—so if you need to download multiple tables, need to do it here. On the View screen (remember View One Table screen), you’ll only be able to download one table at a time. One reason for this is...
...here you’ve got the Modify Table option—it can only work on one table at a time.

Also note, download in .csv format, comma separated fmt, if you need to manipulate further: Excel format is listed as a “presentation-ready” format and uses merged cells that you can’t easily undo if you want to play around with the data. BUT if use Modify Table, .csv download will gv original table, NOT modified version.

Note, tells you how many geographies you have total but only shows first 18.

One nice feature, the table has a built-in floating header—if you scroll down through the table, the header row across the top will remain visible.
Notice in the table the indentation demonstrates the hierarchy of the categories, and the placement of geo’s in columns and variables in rows.

If I click on the Modify Table button...
...you get the Table Tools. Note the Legend in gray at the top—this will always be there when you’re in the Modify Table mode so you can remember what’s what.

Here’s a quick tour of the tools on the page, then I’ll show you the kinds of things you can do with them.

Note Hide Table Tools (we’ll come back to Bookmark; we’ve already talked about Download; and we’ll come back to Create a Map). Note Transpose Rs/Cs link

Show/Hide Rs/Cs checkboxes
(Note, no categories in geographies to collapse/expand.)

Collapse categories +/-
Re-order Rs/Cs carrots
Note that there are no examples in this table of the tools, Sort ascending/descending (arrows), and Filter rows (funnel symbol).
**Not all functionality is available for all tables/surveys!**

Note links to make a map grayed out here. When within Modify Table mode, have to first Hide Table Tools, then make a map.

So let’s say you’re a local official in Cabarrus County and you wanted to present data for your county along with a couple of others for contrast. And you’re interested in the broad categories of marital status but you don’t care about the detail of Married, Spouse Absent. And you want the counties down in the rows. Using the table tools, your modifications might make a table that looks like...
...this. I used the Re-order Rs/Cs carrots to move Cabarrus to the top followed by Alleghany and Beaufort Counties (choice of counties is random—can only move one “space” at a time so it’s tedious); the Collapse categories +/- to collapse the Male-Married, Spouse Absent categories (Separated/Other); and the Transpose Rows and Columns link to swap the rows and columns. It’s as easy as clicking on the icons for each of these changes—only with moving the counties multiple spaces did I have to click more than once.

**Note: now the variables are across in columns you have a filter icon!**

So now I think instead of comparing with Alleghany and Beaufort Counties, I’d rather filter the table and instead compare to counties that have similar populations of men who are married but whose spouses are absent. So I click on the filter icon, the little funnel shape, for that variable’s column...
...and choose the range I want (you can move this filter pop-up around to check against the values in the table)...
...and come up with just three counties within that range. The filter icon is now purple so you can easily see where you imposed it, and if you click on it, you get an option to remove it to return to the full table.

Caveat: Filters & sorting do not work on ACS tables b/c of MOE cells

Now, say you want to map this. Remember that you’re in the Modify Table view so you have to Hide Table Tools to be able to access the Map View. And ---the phone rings.
Your carpool is leaving

NOW WHAT?

You’ve put a lot of time and work into this table and you don’t want to lose it!
Remember that Bookmark link?
Let’s you save a “query” to your own computer.

Has an .aff extension—can change the name, can save anywhere (flashdrive, desktop), can send as an email attachment—may want to change the filename, but don’t change the extension.

Next day…
...Load Query from Main screen, lower right side...
...select the file from where you saved it...
...and, voila, you’re back to where you were. Will always give you this notice once you load the query that you’re not looking at the original table. In Modify Table Tools can Reset to original table.

(Bkmrkg is also really handy given AFF’s 30-min time-out if you have to leave what you’re doing and come back, or if you’re doing something complex and you want to be able to start over from a certain point if you don’t like what you did.)

NOTE HOWEVER, .csv dwntld only gives you the *original* table - dsn't save your onln chngs; excel dwntld *does* save chngs.

Where were we?

Oh, right—Now, say you want to map this. You’re already out of the Modify Table view so you can click on either Map View or Create a Map.
But, wait, you didn’t get a map. Instead, notice that all the figures in the table cells are now hyperlinked.

Remember, you can only map one variable at a time. So when you click on any given variable (geography doesn’t matter—whichever are in the table will be included)....
...it thinks a minute and then gives you this pop-up, noting the variable you chose. When you click on Show Map...
NOW you get the map. Notice you have the Bookmark option here, too.
Although you can only map one variable at a time, you can map multiple *geo's* at once and they don’t have to be in the same state or anything. Of course, the resulting map will be zoomed to show all of the geo’s at once, so the closer they are together the more detail you can get. Have to have at least *two* like geographies.

You can change lots of things on your map.
Within the Colors and Data Classes options you can change:
Transparency
Number of classes
Color
Classing method (can change how the data are classed if want to emphasize different things)
So here I changed the color scheme and the transparency, making it a little less transparent.
Can add both boundaries and features in the two different tabs, and both boundary lines and labels for them, or just one or the other. Boundaries are mostly Census geo’s but...
...features are not. Seem to be ones that appear on topo maps.
“Find a location” option will not preserve your original map! Instead it zooms the map to that location. (Good idea to Bookmark your map before playing around with the features.)

Map markers let you place custom markers (wherever you click) either with points like this red dot for the (very) approximate location of Chapel Hill, or with text labels like the black Chapel Hill label.

Now you’ve got the map the way you want it. Used to be that could only download as image embedded in Excel. That looked like...
Use Excel download format to get a digital file but...
...this.
But now, in addition to pdf and Excel formats, the Map dwnd lets you export jpg images or a shp file (only includes those areas you're viewing—assuming attribute table would include the variable you mapped but not sure). Can add a Map Title but limited to 50 characters: could do “Number of Men, Married with Spouse Absent” but not “Number of Men, Married with Spouse Absent in Three Counties.” And try it out—mine conflicted with existing headings.
Jpeg format looks like this—still grainy but better. Initially had a line on right side of the image but that's easy to crop out with PowerPoint. Scales automatically when you re-size the image.
Okay, now to show you another new feature, I’ve returned to the Main screen, and here’s the link to Clear All Selections and Start a New Search.
I went in and re-selected all counties within North Carolina.
I selected the Race table for the 2010 P.L. (Redistricting) data.
I clicked View and Modify Table, and I Transposed Rows and Columns. Note that we now have Sort arrows in the columns, not just the re-arrange carrots. As with the filters, you only get these Ranking arrows when the geo’s are down in the rows **but also** **you can only get them for Summary File 1 kinds of variables:** basic counts like race, age, sex, family composition, number of households (so unavailable [at least for now] for any socioeconomic variables like income, educational attainment, etc.—give feedback if you want this!!). Up arrow is sort in Ascending order, so the smallest geo’s will be at the top; Down arrow is sort in Descending order so largest are at the top. I clicked on the Descending arrow for Total Population and got...
...this. Note the Sort arrow turned purple again so you know where you changed the table.
Find Technical Documentation

- You can search for 2010 “technical documentation” as well as topics using the Quick Start box on the Main page or in the “Search within Results for...” box on the Search page, but be sure you don’t have other geographies or topics selected.

- You can also link to technical documentation from the i links in the Results list.

- Go to the survey’s page within the Census site

Apparently TD search only works for decennial survey, not ACS (choose Program first then you get the Document Type filter) or economic
Glossary

• AFF – American FactFinder
• .csv format – comma separated format; readable by many spreadsheet and statistical analysis softwares, including Excel
Other Resources

- More detailed reference maps
  - ACS - 
    http://www.census.gov/acs/www/data_documentation/reference_maps/
  - Decennial & Economic Census – 
    http://www.census.gov/geo/www/maps/CP_MapProducts.htm#refmapdesc
General Tips – Search Construc’n Order

- Historical data: choose year first.
- Economic data: choose program first.
- Otherwise: choose geography first.

Geography selection clears Topic selection.
<table>
<thead>
<tr>
<th>General Tips – “Modify Table” Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Collapse variable categories before transposing rows and columns</td>
</tr>
<tr>
<td>- Sort ascending/descending only available for geographies when table is transposed &amp; only for Summary File 1 kinds of variables</td>
</tr>
<tr>
<td>- Sorting and filter functions not available for ACS tables</td>
</tr>
<tr>
<td>- Percentages only show up in certain tables; no calculation function yet available in Modify Tables</td>
</tr>
</tbody>
</table>
Difficult to find old geographies. Note here that with choices in Topics to limit to the 2000 decennial census, metro/micro stat’l areas greyed out – appropriate. Instead...
...in Name tab, **change default Most Requested Summary Levels to All Summary Levels.** Then select Other Statistical Areas and search for Raleigh. (1993) MSA pops right up. If you’ve already selected the year 2000, you’ll only get the 1993 definition, Raleigh-Durham-Chapel Hill. If you haven’t you’ll get both R-D-CH and the current CSA, Raleigh-Durham-Cary. You’ll need to read the TD to understand the difference between the two.
Coming Soon

- (ACS SF4 Product due for release in May)
- Ability to do basic calculations within the table, e.g., calculate percentages (currently percentages are most likely to turn in up Quick Tables or Data Profile Tables).

AFF enhancements being put out grad’ly but adding quarterly announcements of enhancements so more transparent to users
Sign up for News and Notes Email Updates from Main page
Exercise 1

- Pull a table for all counties in your state that shows veterans by sex and age in 2000.
  - Tips: “Veteran” is a word that describes people. Look for a P table.

- See if you can figure out how to apply a filter to find counties with similar numbers of female veterans as your county. Remember you need to transpose rows and columns to get the filter tool.

- Click the Back to Search button at the top of the page and change your geography from all counties to your city.
Exercise 1 Answer (for Orange Co., NC)

- I selected the year 2000. Veterans is a sub-topic under People. After selecting that category, I Narrowed my Search for age and sex. Table P039 has what I want. I added the geography filter for all NC counties.

- I click to View the table, click Modify Table and Transpose Rows & Columns. I see that Orange County has just over 50,000 female veterans, so I click on the filter icon for the Female column and set the Between filter at 50,000 to 51,000. Cabarrus, Randolph and Rowan Counties have similar size populations of female veterans to Orange County.

If actually click Go, will get list of 13 tables but nine of those end in a letter: race breakdowns which don’t need for this. May not get that far b/c auto-suggest pops up a good option.
Exercise 1 Answer – continued

- I clicked on the Back to Search button. I clicked on the orange X next to All Counties Within North Carolina. In the List tab, I selected Place within a State and drilled down to NC—Chapel Hill. I added it to my selections and closed the pop-up window.

- My selection of the veterans table was wiped out so I re-selected Table P039 and clicked view. The data are not there. Because I chose this same table in the last search and we didn’t Clear All Selections, the *filter* we applied in the last View continues to apply here. If clear all selections & start over, get data.
Exercise 2

Find # of people who said they were white and Asian who are homeowners in Seattle, WA. (Use a table from ACS data, that is, a B or C table. (Tip: the Census term for homeowner vs. renter is “tenure.”)

When add in race/ethnic grps, in View table screen get drop down menu to view those groups, don’t get groups auto’ly, depending on kind of table you pull: Dtld Tbls will *always* list them out; profiles will h/ drop down menu
Exercise 2 Answer

- **Select Seattle in Geographies**
  - List >> Place within State >> WA >> Seattle >> Add >> Close Geo window

- **Select Tenure from Housing Topics, under Occupancy Characteristic**
  - Owner/Renter (Tenure in Occupied Units) >> Close Topics window

- **Race and Ethnic Groups**
  - White & Asian is Code 107; click in checkbox >> click Add at top >> Close Race & Ethnic Groups window

- **Choose a Table (I chose B25003 – Tenure)**

When add in race/ethnic grp, in View table screen get drop down menu to view those groups, don't get groups auto'ly, depending on kind of table you pull: Dttbl Tbls will *always* list them out; profiles will h/ drop down menu
Exercise 3

Find # of furniture stores in Boston by zip code from the most recent Economic Census.

Economic Census first; zip codes fully/partially within Boston; Industry Codes for furniture stores
Exercise 3 Answer

- Topics >> Dataset >> 2007 Economic Census >> Close Topics window
- Geographies >> Name >> search for “all zip codes boston” >> select All 5-digit ZIP codes Fully-or-Partially within Boston city, MA >> Add >> Close Geographies window
- Industry Codes >> search for “furniture stores” >> select and Add any of the three resulting codes >> Close Industry Codes window
- View table – Note varying # of rows per ZIP code

If need more info on the difference between
Exercise 4

- Find the most recent median household income for Orange County, CA

- Find the most recent median household income for all census tracts within Orange County, CA
  - (Can you Sort them?)
Exercise 4 Answer

- Geographies >> Name >> search for Orange County, CA >> select & Add Orange County, CA; search for tracts within >> select & Add All Census Tracts within Orange County, CA
- Topics >> People >> Income & Earnings >> Income/Earnings (Households)
- Select Table S1903 - MEDIAN INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION-ADJUSTED DOLLARS)
- You cannot Sort them.

Can do both county & tracts at once. Very likely more than one table with these data.

Even after go into Modify Table and Transpose Rows & Columns, you can’t Sort Ascending or Descending both because these are ACS data (have MOEs) and because they are not SF1-type variables.
Exercise 5

- Find the state with the most people not covered by health insurance (uninsured) in the most recent year.

How would you sort to find the state with the most uninsured? Download in csv and sort in Excel.
Exercise 5 Answer

- List >> State >> All States within the U.S. >> Add >> Close Geographies window
- Topics >> People >> Insurance Coverage >> Health Insurance >> Close Topics window.
- Select table (may be easier to Sort if choose single subject table like S2701 - HEALTH INSURANCE COVERAGE STATUS
- Download in csv format and sort in Excel: California by straight number but probably want to insert a column and calculate percentage
Records Mgt Rules for Archiving

- Decennial census: retain and display the current and 1 prior
  - Current: Census 2010
  - Prior: Census 2000
- Quinquennial census: retain and display the current and 1 prior
  - Current: ECON 2007
  - Prior: ECON 2002
- Annual surveys: retain and display the current and 4 prior (5 for ACS)
  - ACS: 2010, 2009 - 2005
  - Annual Economic Surveys:

Rules developed based on stats of use of older data & system performance requ’s
Five for ACS to provide at least two non-overlapping multi-year estimates

From CB webinar by Robert Chestnut, Chief, Requirements and Stakeholder Relations Branch, 01/11/12, http://www.census.gov/mso/www/training/pdf/aff_legacy_1-12-12.pdf
(audio file linked from http://www.census.gov/mso/www/training/library_aff.html)
With move to new AFF interface have lost “live” AFF access to:
- 1990 Census
- 2000-2004 American Community Survey
- 2000-2001 Supplementary Survey
- 1997 Economic Census
- 2003 Annual Survey of Manufactures
- 2003 Nonemployer Statistics
Can get to as ftp flat file downloads.
For anyone who integrates Census data into GIS

- In the old AFF, the Excel file download had the concatenated FIPS and the .csv file did not. In the new AFF, the Excel file format is “presentation-ready” so GIS users should download the .csv file which in the new AFF has the concatenated FIPS codes.
GIS users (courtesy of our GIS librarian)

“legacy” format - to bring this data into ArcGIS you had to delete row 2 shown in blue but that was it.
GIS users (courtesy of our GIS librarian)

New AFF: you have to move the yellow cells A5, B5 and C5, up to the header row, specifically cells A1, B1, and C1, and then delete rows 2-5 shown in blue

“Then I usually recommend to people that they create a file geodatabase and import the tables so they can specify the FIPS field as text.”

Exactly the same procedure for ArcGIS 9.3.1 and 10, and Excel 2007 and 2010.
Glossary for GIS

- FIPS code - a numeric identifier that many folks use to join numeric data into GIS files, and there’s a separate code for each level of geography, e.g. 037 is the state of North Carolina, 001 is Alamance County.

- Concatenated FIPS - FIPS codes can repeat across the country—there’s probably a 001 county in every state. So you have to have the full FIPS code to identify a given geography uniquely: 037001 for Alamance, NC instead of the separate codes for state (037) and county (001). Putting the codes together like that is concatenating, where you preserve leading zeroes and insert no spaces. (And the leading zero is important!)

- GIS – Geographic Information System; thematic mapping