Using the Application Programming Interface (API) with the American Community Survey (ACS)
Transcript
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Javier Gomez, American Community Survey Office
Tammy Anderson, DataWeb and Applications

This presentation was presented as a webinar to the general public on June 21st, 2017 by Javier Gomez of the U.S. Census Bureau's American Community Survey Office, and Tammy Anderson, of DataWeb and Applications. A link to the recording is available at https://censusevent.webex.com/censusevent/lsr.php?RCID=c0d9784e5cbee417cfa85d4efef23d06

The transcript of the webinar follows. Slide references and links have been added to the spoken text as appropriate.

Coordinator: Welcome and thank you for standing by. At this time all participants are in a listen-only mode until the question and answer session of today's conference. At that time you may press Star, then the number 1 on your phone, to ask a question.
I would like to inform all parties that today's conference is being recorded. If you have any objections you may disconnect at this time.

I would now like to turn the conference over to Javier Gomez. Thank you. You may begin.

Slide 2: Title Slide

Javier Gomez: Good afternoon. Thank you for joining us today. My name is Javier Gomez, from the American Community Survey Office, and along with my colleague Tammy Anderson, from DataWeb and Applications, we are going to present, using the Census Application Program in Interface, API, with the American Community Survey.

Slide 3: Outline

The outline for this presentation will be as follows. I am going to start by talking about the ACS basics and content. Then I am going to let my colleague to take over and talk about the Census API basics, using the API and how to build an API request.

At the end we will present information on how to stay in communication with us and have some time for questions.

Slide 4: ACS Basics

The American Community Survey is an ongoing national survey that samples approximately 3.5 million addresses per year which comes out to about 290,000 addresses per month.

This data is collected continuously through the year to produce detail population and housing estimates each year. The survey covers the resident population of the United States and Puerto Rico for those people living in housing units and group quarters.

Housing units include living arrangements such as typical house, apartment, or mobile home. Group quarters or group living arrangements are owned or managed by an entity organization. For example, dormitories or correctional facilities.

The survey produces critical information for a small area in a small population group. The ACS is the only source of information for many of these topics in these small areas. These estimates are designed to produce critical information that was previously collected in the decennial Census.

Our estimates cover more than 35 topics and support more than 300 federal uses and countless other non-federal uses.
We release two different sets of estimates each fall. 1-year and 5-year periods data sets.

Slide 5: ACS Content

The content collected by the American Community Survey can be grouped into four main types of characteristics. Social, economic, housing and demographic.

((Crosstalk))

Javier Gomez: Let's take a closer look at the type of information each of these categories contains.

Social characteristics include topics such as education, marital status, fertility, veteran's disability status; etcetera. The American Community Survey also collects basic demographic characteristics such as sex, age, race, and Hispanic origin. This is the same type of information - same information that was collected by the 2010 Census.

Economic characteristics include such topics as employment status, income, commuting to work, occupation; etcetera.

And housing characteristics includes topics such as tenure, information about occupancy and structure itself, home value, housing costs; etcetera.

These topics are used to produce more than 1000 tables for local communities, resulting in more than 11 billion estimates this year.

Slide 6: Census Geographic Concepts

These are some of the geographies for which ACS data is produced and the relationship between them. Local geographic areas fit neatly within the largest area directly connected by line. For example, a School, Congressional, and State Legislative districts fit neatly within states and do not cross state boundaries. However, they may cross boundaries of Counties or Metropolitan areas.

Statistical geographic areas are defined primarily for data tabulation and presentation purposes.

As you can see on your screen, at the bottom of this diagram we have the Block Groups. In the American Community Survey, Block Groups are the lowest level of geographies published, and they are statistical divisions of Census Tracts defined to contain a minimum of 600 persons or 240 housing units, and a maximum of 3000 people or 1200 housing units.

Slide 7: Availability of ACS Data Products

ACS data products are released 1-year after the data is collected. In the first year of data collection with the full sample was in 2005. Therefore, ACS data collected in 2015 was released in 2016 as 1-year estimates.

ACS 1-year estimates pull in data collected over 12 months, is available for geographic areas with a population of 65,000 or more. We plan to release the 2016 ACS 1-year estimates in September of this year.

ACS 1-year supplemental estimates are sixty detailed tables that are available for geographic areas with a population of 20,000 or more. They are simplified

versions of popular ACS tables and we plan to release them in October of this year.

The Census Bureau created this product to respond to data users' needs for timely data of smaller geographies. The supplemental estimates will provide more current data and annual updates to almost twice as many geographies as compared to the standard 1-year release.

ACS 5-year estimates pulling data collected over 60 months, are available for geographic areas of all sizes, down to the Census Tract and Block Group level. We plan to release the 2012-2016 ACS 5-year estimates in December of this year.

ACS data is available for geographic areas with a population of 20,000 or more in the form of 1-year and 5-year estimates. ACS data are only available for geographic areas with a population of less than 20,000 in the form of 5-year estimates.

Slide 8: Outline

Now I am going to let my colleague Tammy Anderson to continue with this presentation.

Slide 9: The Census Data API

Tammy Anderson: Good afternoon. In this portion of the webinar we are going to show you how to access ACS data from the Census Data API.

Now there are 39 ACS data sets on the Census Data API. Since January of 2016 through May of 2017 last month, ACS were the most requested data from the Census API. This is 85% of all requests or 564 million in that time.

The Census Data API - API stands for, Application Programming Interface. The API is a data service, you use it to retrieve data. The Census Data API enables data providers here at the Census Bureau to put data out to the public in a standardized way, and this helps you, the data user, retrieve it in a standardized way. So once you learn how to retrieve data for one data set, you can easily retrieve data for another.

The Census Data API enables software developers to use Census data within their software applications.

From this point forward I would like to refer to the Census Data API as simply, the API, for this presentation.

Slide 10: Advantages

The advantages of using the API; well because we put data out to the public on the API in a standard format, this reduces your learning curve across many of our data sets.

And for the API, you access only the variables and geographies that you need. You are not having to download a table or a file containing variables and geographies that you won't be using.

And for the API, there is no need to host data on another server, we host the data for you at the Census Bureau. And as new data become available, you

have immediate access to it. And there is no complex interface to using the API. It’s really easy to use once you learn how to build that first request.

Slide 11: Uses

The API is used - or is built with software developers in mind. Software developers who build mobile and web applications. And within these applications software developers can develop data visualizations.

And the API queries can be embedded in code for statistical analysis software, as well.

Slide 12: API Example from Cornell University

Here are some examples of apps that use the Census API. Here is a Web app that is external to the Census Bureau, created at Cornell University. And this is using American Community Survey data, and is an app for poverty status.

Slide 13: U.S. and World Population Clock

And here is an app that we have at the Census Bureau, our U.S. and World POP Clock. This is a Web application. And we have several apps - we have several applications that access data from the API here within the Census Bureau.

Slide 14: API Example from Dweller

Here is a phone app - a mobile app. This is called Dweller that also pulls data from the API.

Slide 15: API Example from Pennsylvania State Data Center

And here is a dashboard created by the Pennsylvania State Data Center.

Slide 16: Outline

Let’s look at using the API.

Slide 17: Example: American Community Survey

I first want to start with something that may be familiar to you. This is an ACS table from the American FactFinder on Poverty Statistics in the U.S. This is 2013 1-year estimates, and this is Table B17001, and these data are broken down by state. And the table shows the estimates and margin of error.

Right above the table is an API query requesting the first line of these data. So you would get the same results, but you will see in a moment that you have a different format for the output.

This data query by the way, is pulling data on estimates. We are not pulling data on margins of error, just what is highlighted there.

Slide 18: Output

When you run this query or run this request, this is what the output looks like, and you can compare this to the table on the previous screen. This is what we call JSON format, and JSON stands for JavaScript Object Notation.

And you can see here the top line is the list of variable names, and below that are rows of data for each state.

So let’s look at how to build this request step by step.

Slide 19: Outline

Slide 20: API Request – Four Easy Steps

There are four easy steps. First, identify the data set that you are going to use, and you can click these links; use these URLs to get a list of data sets. And then once you identify the data set, identify the items that you need, the variable names, and the geographies.

Slide 21: API Request – Four Easy Steps

And then you need to request the variables and the geographies using the syntax, the “Get” statement, and the “For” statement. And then you put it all together.

So those are the four basic steps. And we are going to break it down even further in a moment.

Slide 22: Example: American Community Survey

Back to our example from AFF - American FactFinder. We are going to retrieve these data.

Slide 23: API Discovery Tool

And at this time I am going to take us through a useful tool for building these requests. This is the API Discovery tool, and this will list all the data sets, and it helps developers build their queries. I am going to go out at this time to our Discovery tool using this URL.

Live Demo: Discovery Tool

So here we are at the Discovery tool for the API. And this lists all the data sets that we have, and this grows weekly and monthly as we continue to add data sets.

At the top you will see the title of the data set and a description of each one. The next column is the vintage or the year of the data set. And the data sets in this Discovery Tool are sorted by vintage. Then they are next sorted by the data set name.

So at the top we have county and business patterns, but the data set name that you would use for the API is CBP.

Next you have the geography list. So we are just going to use the data set at the top, the 1986 county business patterns. I will click the geographies, and this is a real simple data set with just three geographies - U.S., State, and then the County level.

Now I am going to go back to Discovery, and let us look at the variables that are available for this data set. We click “variables” and we have 22 variables that you can include in your queries.

And examples of queries or requests. And this is probably one of my favorite places in the Discovery tool, because from here I can build other queries by using these examples. I can add variables from the variable list.

And these are examples for every geography. So if got hung up on how to pull data for complex geographies, this is a great place to come to.

And the documentation that -- push that -- that takes you to something called the Developer's Page which I will talk about. That's a higher level description of this data set.

And then the API based URL, when you build your request, this is what it starts with.

Now I am going to take us back to the presentation. And let's start building this request.

Slide 24: Start Your Request

All requests begin with "https". And "s" is very important here. This is a secure environment. And api.census.gov/data.

Deborah Rivera: Folks, just give us one second here. We'll be right back.

Tammy Anderson: Okay, so we are starting our request here.

Slide 25: Add the Data Year

Next, we are going to put in the name of the data set, but first you choose the year. So back at Discovery, you saw that year came before the name of the data set. So it's added here.

Slide 26: Add the Dataset Name

And the data set that we are using is the "acs1". Now for the ACS there are sometimes two levels in the data set name such as acs1 profile. You would need to add that other level. But for this it is a basic acs1.

Slide 27: Discovery Tool

And that’s how it appears in our Discovery tool.

Slide 28: Start Your Request

Now you start the request with the “Get” statement, question mark, get equals.

Slide 29: Add Your Variables

And your variable list comes next. And this is where you can find your variables. Gave you that link.

Slide 30: Discovery Tool

And this is back in the Discovery tool. You get here by clicking the variable list.

And you can search on it using your, whatever search in your browser. And we are looking at the estimate for income in the past 12 months, below the poverty level.

Slide 31: Add Your Geography

And now add your geography, and that starts with “ampersand for equals”, and this is for all states, so you can add a wildcard for all states.

Now if you wanted to look at one state at a time, you would use the FIPS code for most of our data sets.

Slide 32: Discovery Tool

And for this 2013 one data set, here are all the available geographies. And you can see that they are detailed.

Slide 33: Discovery Tool

And let's say that you wanted to look at the -- this is a little sidebar here -- you wanted to look at County Subdivisions within County. So this first example is all county subdivisions. And you see the wildcard within the State 36, within New York, or you can look at the County Subdivisions in a state and a specific County. And again, the Discovery tool shows you how to build this type of query.

Slide 34: Put it all Together

And when you put it all together, this is what is returned to you, and the data from each state is on a separate row.

Slide 35: Resource Links

So that's the basics for building an API query. I want to point you to some important resources.

We have the Developer's Page. That gives you a higher level information than the Discovery tool. And the API Discovery tool we have in three formats.

And then if you want to convert your JSON to CSV, Comma Separated Values, format, you click this link.

Slide 36: Developers Page

And this is our Developer's page, just showing you what that looks like. So you can access the API from here. This is a good place to go. And you also should come here for important updates, changes that are happening to the API and perhaps your particular data, the data program you're interested in. So check back here.

Slide 37: Available APIs for ACS

And from this Discovery page you can see the available APIs. And I have this available here - APIs for ACS. And within some of these data sets there are even more data sets. So click the links, take a look around.

Slide 38: Available APIs for ACS

So at a higher level here are the available APIs for ACS. 1-year, 3-year, 5-year, migration, place, and supplemental data.

Slide 39: Register for a Key

Now if you're a heavy user of the API, more than 500 queries or requests per day, that is 500 requests per day or more, you need to register for a key. You can do this from the Developer's page, it is right there, request a key, and we ask for your organization name, email, and agreement to the terms of service.

Slide 40: Help Using the API?

Okay, if you have questions about using the API, you can contact the DataWeb Helpdesk and email us here or call us on this 1-866 number.

I think I am going to turn the rest of the Webinar over to Javier.

Slide 41: Outline

Javier Gomez: Thank you Tammy.

Slide 42: Source Us!

Before closing out this presentation, if you are already an ACS data user, we would like to invite you to source us. You can see some examples on your screen. And by sourcing us you are helping us to reach out to new ACS data users.

Slide 43: Continue the Conversation #ACSdata

We would also like to invite you to continue the conversation using the hashtag ACS data on the different social media platforms. Or if you have any questions you can send them to, acso.users.support@census.gov.

Slide 44: Data Users Group

Also I would like to remind you that there is already an ACS Data User's Group Online Community. The ACS Data User's Group was formed in

partnership with the Population Reference Bureau, and it is a great way to learn from your peers about how to use the ACS for all kinds of applications.

Go to ACSdatausers.org to learn more, including how to sign up to be one of the over 1,800 users in the ACS Online Community. There is even a group specifically for Census API.

Slide 45: Need Local Stats?

As a reminder we have data dissemination specialists throughout the country who can provide their workshops locally. If you are interested in a workshop, you can contact them at the phone number or email that is shown on your screen.

Slide 46: Questions

Thank you very much. And at this moment we can take questions.

Q&A Session

Coordinator: Thank you. We will now begin the question and answer session over the phone. If you wish to ask a question please press star 1, unmute your phone, record your name and your organization clearly. Your name and organization is required to introduce your question.

If you need to withdraw your question press star 1. Again to ask a question please press star 1. It will take a few moments for questions to come through. Please stand by. Please stand by.

The first question comes from (name removed) from Alliance HealthCare. Your line is open.

(Question #1): Okay, thank you. Yes, I use your Web site a lot. Currently I use the American FactFinder. And like one of the examples, I am often breaking down a State, County and City actually, I do a lot. And I have a - you know what I do is convert to an Excel spreadsheet. And I have a - you know I have a pretty good process going right now.

You know, should I change what I am doing now or stick with it and look for opportunities to use the API sometime in the future?

Maureen Brauning: Hi, this is Maureen Brauning from the DataWeb office. My take on that is, I find when you download out of American FactFinder, you get a lot of extra headers and footers and extra things you don't really want when you're going to do calculations on the data. So I do find the API to work fully better, because you just get the data columns. You just get the data, so you don't have to worry about the mixed columns that were merged or anything like that.

So I do find the API useful in that sense. I copy exactly what returns out of the API, drop it in Excel and then use the text delimiter format, and Excel does it all.

(Question #1): Okay. Also, when is your Web site going to be back up? I notice that it is going through some software upgrades or something, on American FactFinder right now.

Hello?

Frances Alonzo: We are looking into it.

Javier Gomez: Yes, we are looking into it. Sorry about that.

Frances Alonzo: We are checking right now so, just bear with us here. We are going to put you on hold, just for a second here.

(Question #1): Sure.

Frances Alonzo: Now you are on the American FactFinder site. Is that correct?

(Question #1): Yes.

Frances Alonzo: Well we are in it now and we are not having any issues. What is it that you're experiencing exactly? We don't see that.

(Question #1): Well usually when I get the, I open to the web page where it asks you - or it lets you select a state. Then you know, I usually select a state and go from there.

But I notice there is just some, you know, programming numbers and letters in there. And it has been so for around for about a week now. But…

Frances Alonzo: Okay, so you know, we will have to look into this because we are not experiencing that. But if you would, could you send us an email to pio@census.gov and we will address that. But please be detailed in what you are experiencing so we can get that to the proper people to look into that.

And please describe the process of what you are doing so we can recreate that. And we can see and we can have our technical people look in. So that way they can recreate it on their end.

(Question #1): Okay. Okay, thank you very much.

Frances Alonzo: Thank you for your call.

(Question #1): Okay. Bye-bye.

Coordinator: The next question comes from (name removed) with Community Impact Newspaper. Your line is open.

(Question #2): Thank you. We love that we have access to this data, and we are particularly interested in drilling down to the carrier route level. We are just wondering how granular the data can get, and how we go about kind of establishing that through the query.

Frances Alonzo: Please explain carrier. We are not clear on that you are describing. Could you rephrase that please?

(Question #2): It would basic - a carrier route is a subset of a Zip code. A Zip code is made up of multiple carrier routes.

Man: It is postal.

(Question #2): It's a postal term.

Frances Alonzo: A postal term. Well you know again, that is a good question. I mean you have stumped everyone in the room. So I will tell you what, again well if you

would, send us that to pio@census.gov with your contact information so we can look into that. That is a new question for all of us here, to get to a carrier code, that is quite interesting.

Yes, you know, we have seen some information available at the zip code level, but as far carrier code, wow that is something new. And maybe we should look at that.

So if you would, send me that please at pio@census.gov with your contact info so we can get you the information on how to get there.

(Question #2): Very good. I appreciate it.

Frances Alonzo: Okay, thank you very much.

Coordinator: The next question comes from (name removed) from State Voices. Your line is open.

(Question #3): Hi there. My question is fairly quick. I am just wondering, is there a way to access the recorded version of this webinar once we are through? I know some other people that would like to see that were not able to be here today.

Javier Gomez: Hi. Yes, the recording will be posted on the web site where you found this Webinar. Give it probably like a week and it will be there.

(Question #3): Great. Thank you.

Javier Gomez: You are welcome.

Coordinator: The next question comes from (name removed) with U.S. Census Bureau. Your line is open.

(Question #4): I have two questions. The first question is, is the plan for the API to replace FactFinder in DataFerrett sometime down the road? And my second question is, can you explain the difference between the 1-year estimate and the 1-year supplemental estimate?

Javier Gomez: Let me start with the second question. The difference with the 1-year estimate and the supplemental estimate, basically the difference is in the population of that geography that you are looking at.

1-year estimates are only released for populations of over 65,000 or geographic areas with a population of over 65,000. While supplemental estimates are released for geographic areas with a population of over 20,000.

(Maureen Brauning): This is Maureen again, speaking about the API to American FactFinder. The API is helping to drive and deliver all the data to the new Census Bureau data platform.

It is not really a replacement for American FactFinder because the API obviously does not have table displays or any of the mapping or graphical features that you were used to in American FactFinder, but the data will - that feeds to the new platform that we are delivering will appear in API.

(Question #4): So you do not anticipate DataFerrett or FactFinder going away down the road? It's just going to supplement the API?

Frances Alonzo: Tell you what, let's take this conversation via email. And again, if you could address that to me at pio@census.gov, we can address that question and, we can move on to others that are in the queue. Thank you.

Coordinator: The next question comes from (name removed) from Real Time Solutions. Your line is open.

(Question #5): Hello. My question is about the - we are interested on looking at the migration for the Navajo Nation. The Navajo Nation has the specific that it is located in three states, so that kind of makes a little bit harder to measure the people that is Navajo that is living outside the Navajo Nation. So that will be my - what will you suggest to approach this problem?

Frances Alonzo: For that particular data, if you would contact us at pio@census.gov, we are - we do have some people we can point you to. But we want to make sure we get you the right person.

(Question #5): All right.

Frances Alonzo: So if you would address that, please mention that you were at this webinar, and that way we can make sure that we get you that information. Because we do have it but, right offhand, to be able to point it to you, that is not what we are prepared to discuss right now.

(Question #5): That's makes sense. Thank you.

Frances Alonzo: Okay, thank you.

Coordinator: The next question comes from (name removed) with the Allegheny Conference and Community Involvement. Your line is open.

(Question #6): Hi. Similar to the question that was asked earlier, if the recording would be available online later, will the PowerPoint slides be available as well?

Javier Gomez: Hi. Yes, as I mentioned before, the recording will be available at the Web site probably in around a week. And the slides, I think they are on line already but, I will double check. They should be posted already. If not, I will make sure that they are, right after the presentation.

(Question #6): Wonderful. Thank you.

Javier Gomez: Thank you.

Coordinator: And the next question comes from (name removed) from The University of New Mexico. Your line is open.

(Question #7): Hey, good afternoon. Real quick, I want to know what the schedule is for some of the data sets that are not available through the API. Do you guys have a listing of what future data you expect to be in there?

Tammy Anderson: Are you talking about ACF data sets or all data sets?

(Question #7): I am thinking more about all data sets. But not all of ACS is in there either, right?

Tammy Anderson: Right. We do not have a schedule posted at this time. But if you do have some specific data sets in mind, we may be able to help you. So the address for that…

Frances Alonzo: PIO.

Tammy Anderson: …if you can contact pio@census.gov with that question, we can get back with you with some more information.

(Question #7): Okay, that would be perfect. Thank you.

Tammy Anderson: Thank you.

Coordinator: The next question comes from (name removed) from the Community Advancement Network. Your line is open.

(Question #8): Hi, good afternoon. Thank you for all the insights I was able to learn today. My questions have been answered. It was about the PowerPoint and about the presentation.

But I do have something that I might be able to add. Zip code tabulation areas are the geography that U.S. Census Bureau uses. And it is different than the U.S. Postal Service Zip code. Because U.S. Postal Service Zip codes can change a little bit more frequently than Zip code tabulation areas.

If you Google, Census Bureau Zip code tabulation areas, you should get more information. Thank you.

Javier Gomez: Thank you.

Coordinator: The next question comes from (name removed) with the Florida Department of Economic Opportunities. Your line is now open.

(Question #9): Hi, thank you. Really enjoyed the presentation. I was curious, can you work through an example. Do we have enough time for that?

Tammy Anderson: What example would you like to see?

(Question #9): Okay, how about if we look at the number of households that receive cash public assistance in the State of Florida.

Maureen Brauning: Okay, now you are talking through American FactFinder?

(Question #9): It would - well I know how to do it through FactFinder. I wanted to see how it would work getting it through the API.

(Maureen Brauning): Through the API.

Tammy Anderson: What data sets - so, have you done this before through American FactFinder?

(Question #9): Yes, I actually looked it up this morning. That is why I would like to see how you do it through this way.

Tammy Anderson: Okay, what data set are you working with?

(Question #9): It was the 2015 1-year data set.

Tammy Anderson: Okay, so the 2015 ACS-1 data set. Okay, I can walk you through it in a general way and point you to the place where you would find your information.

Okay, so we go back to the API and we want to find 2015 first. Okay, so I am just going to do a search on 2015. And - okay, and I have a few ACS data sets for 2015, and it looks like I should probably use the 2015 acs1.

Okay, so let's choose this data set. And then I want to look at the variables. Now we have thousands of variables that will come up.

Maureen Brauning: You know which table you were looking at in American FactFinder? Then we don't have pull the variables page up. The variables list is over 100,000 variables now, and it takes a long time to load. So we don't want to slow it down for everyone.

(Question #9): Yes. I know it came from - it was B19057.

Tammy Anderson: Okay. So I am going to go to the examples, and that was the underscore E for that.

Okay, so what I am going to do here, this is how I build queries. We are going to use the ACS, 2015 acs1 data set. So I am going to go to the examples. And at the U.S. level, let's - what's that?

Maureen Brauning: Florida is his state.

Tammy Anderson: Okay, you want Florida. Okay, and what is the FIPS code for Florida.

Maureen Brauning: Twelve.

(Question #9): Twelve. Yes, twelve.

Tammy Anderson: Okay. All right. So for Florida, you know I am just going to click that example and I am going to go to the URL and I am going to change the state. And for that variable BO1OO1 estimate.

Maureen Brauning: So, all right, okay so I always build my URLs in baby steps so I check them, so I now have data for Florida. Now I would change my variable name to B15097.

(Question #9): Yes. Actually I think it's 19057.

Tammy Anderson: One, nine, zero, five, seven.

Maureen Brauning: Take the first zero out. Take the first zero out, and then hit enter, and see if that returns. But, I take baby steps as I do.

Tammy Anderson: And what about the underscore 001E?

Maureen Brauning: That should work. That should be the first example of the table you saw, the first number cell in the table you saw in American FactFinder should be returned.

So in Florida, I forget what's the variable stands for, you have that value. You would add multiple different variables in to get - so you get 002, 003; 004 to get all the subsequent variables in that table.

We also recently rolled out a new group feature that you could use in this situation which would allow you to pull all the group - all the variables in that table from American FactFinder. We just released that last week.

So that is also an option that you could use. That's listed on the Developer's page if you want to look at that for some more information.

(Question #9): And so once you have the data pulled up like you just did, you would then just copy and paste it into Excel or something.

Maureen Brauning: That's what I've been doing; yes. And then you do whatever math you so choose with it.

Yes, I just do a select all, copy all, drop it in Excel, and then delimit it by comma. Okay, let's do this for all states. Yes, and then we pull it into - yes. Does that answer your question?

(Question #9): Yes. So it seems like you still need to know quite a bit about the data that you're pulling in. If you don't happen to know the table number, it might be quite a process to figure out where exactly, this variable is?

Maureen Brauning: That is true. You would use a, you would look at the variables page that we were going to pull up. But as we stated, it takes almost two minutes to pull it up with all the variables in it. So we didn't want to do that.

You could use the control F function on your browser to find all the variables that way. Or if you do know the table number from AFF, that's how the variables are labeled currently, in the API.

(Question #9): Okay.

Frances Alonzo Okay, thank you very much for your call.

(Question #9): Yes, thank you.

Coordinator: The next question comes from (name removed) from Fairfax County Government. Your line is open.

(Question #10): Yes, good afternoon. We are using some of your data in interactives that we have built. And my question is, when you are developing the API codes, is there a way to designate that you want the most recent year available without specifically putting in a date?

Maureen Brauning: The simple answer to that is, no. You would have to manually enter it, check by Discovery tool to see what the most recent release is.

(Question #10): Okay. And then you would have to go into your API address and update it as well, if you are using it in a software program?

Maureen Brauning: That is correct.

(Question #10): Okay.

Frances Alonzo: Thank you for the call.

Coordinator: The next question comes from (name removed) from the Center for Rural Communities. Your line is open.

(Question #11): Hello. Yes, I was wondering, I seem to recall reading something about a 50-variable limit. Is that still the case?

Maureen Brauning: No, this is Maureen again. Yes, that is still the case. But with the new group functionality that we just rolled out, you should be able to get all the variables within the table for acs1.

It's only working for acs1 at the current moment. We plan on rolling that out to other data sets. But with that you can pull up to I think, 524 variables is the largest table.

So you can get estimates, margin of error, and everything with it, with one call just by using the new groups feature which you can read about on the developer's page.

(Question #11): Okay. Another question is, I have a similar situation where we are studying an area that crosses state boundaries. And I am wondering, what data can you pull across state boundaries?

It sounds like you can do, you can pull like County data or pull all the places from, through your (unintelligible) state. But can you pull like specific places from three states?

Tammy Anderson: You should be able to if you alter the "for" section of your query.

(Question #11): So how I have tried to do it in the past, I will do, for place, and then list a bunch of place codes. But it seems that the ACS only wants the last five digits of the place code without the state part for it. So I've done, and in, a specific state.

So I haven't been able to get it across. So, what codes would you use for the four then, to get it across state lines?

Maureen Brauning: That I don't know, just because I haven't ever done that myself. So I would…

(Question #11): Okay.

Maureen Brauning: …submit your question to the pio@census.gov and we can - I can play with it and see if I can get it to work too.

(Question #11): Okay, thank you.

Maureen Brauning: Thank you for the call.

Coordinator: The next question comes from (name removed) from the Treasurer's Office. Your line is open.

(Question #12): Hi there. I am, I've been using American FactFinder to look at state level data on like median earnings by gender by race for a while. And I have a few questions.

This is not - some of the questions are not necessarily specific to the API. My first question is, is it correct that using the American Community Survey is the best place to get that kind of state-level data from? That would be the first question.

And then the second question is, is it possible, either with the American Community Survey or the current Population Survey through American FactFinder or through the API, is it possible to see median earnings by sex by age for state-level data? Like either, I guess, through different age brackets, is that possible?

Tammy Anderson: Hi, this is Tammy Anderson. I can answer the second question. The current Population Survey is not, the data are not available on the API yet.

(Question #12): Okay.

Tammy Anderson: You would need to use DataFerrett for that. And your first…

Frances Alonzo: Could you repeat your first question, please?

(Question #12): So I mean I guess the bulk of my question is, is it possible somewhere to see median earnings by sex by age for - on the state level?

Maureen Brauning: I think you should be able to build that table in DataFerrett yourself.

(Question #12): With the current Population Survey?

Maureen Brauning: Correct. Yes.

(Question #12): Okay.

((Crosstalk))

Woman: So you (unintelligible) earlier, so you can call them and see if they can help you build it in case you have trouble.

(Question #12): And you say that's DataFerrett?

Maureen Brauning: DataFerrett, which is another Census Bureau tool.

Tammy Anderson: And the staff to contact for that directly would be the DataWeb staff. That is listed in your presentation.

(Question #12): Okay.

Frances Alonzo: So if you - until that presentation gets all put up, you can, if you would, put it into the Census.gov search and put in DataFerrett. And their web pages comes

up, as well as, their contact information. And they can walk you through that. I understand that they are very accommodating.

(Question #12): Okay, wonderful. And is it best practice to get state-level data from the ACS or the CPS, or are they both good for state-level data?

Frances Alonzo: I think it depends on what you are looking for specifically.

(Question #12): Okay.

Frances Alonzo: You know there are - yes, it depends on what you are looking for. So, but I would again pose that question to the DataFerrett folks and they could best be able to help you build that table.

(Question #12): Wonderful.

(Maureen Brauning): You know, customize it to what you need. So that would be, they would be the best folks for that.

(Question #12): Awesome. Thank you so much for your help.

Frances Alonzo: Thank you for your question.

Coordinator: The next question comes from (name removed) from Florida State University. Your line is open.

(Quesiton #13): Thanks. It was a great presentation. I had a comment and a question. A comment is, for any Python developers out there, there's a really nice tool called CenPy, C-E-N P-Y, that hooks into the Census API. And you can get all the data in a Python environment. That's on GitHub.

The question is, are the ACS replicate tables going to be available through the API any time soon?

Maureen Brauning: Okay, we actually do not know the answer to that question. We will have to look it up and I guess, email your question to PIO and we can get back to you.

(Question #13): Okay, great.

Coordinator: The next question comes (name removed) from SNS. Your line is open.

(Question #14): Hey, thank you. My questions were already answered a while ago so, thanks anyway.

Frances Alonzo: Thank you so much for joining us.

Coordinator: As a reminder if you wish to remove your question from the queue, press star 2. Thank you. The next question comes from (name removed) from Doyon. Your line is open.

(Question #15): Good afternoon. I had the same question answered earlier with regard to the PowerPoint and the recording. Thank you.

Frances Alonzo: Thank you so much for your call.

Javier Gomez: Thank you.

Coordinator: The next question comes from (name removed). If you would please, state your organization name. Your line is now open.

(Question #16): Yes, this is (name removed) from (unintelligible) BIS. I appreciate you all doing this presentation.

I am really new to this Census data, relatively speaking, compared to other folks. So my question is, the Census, the API that you talked about is mostly to analyze information in a table format.

But I am also looking for information, if I can have some sort of an API to do - look at the information through GIS format in the new spatial way. So, what would be the right resource for that? That's the second half of the question.

Maureen Brauning: The Census Bureau actually has two GEO APIs that you can also find on the Developer's page which hopefully help with the geospatial. I am not super familiar with either of those.

(Question #16): Can you show it on a screen? Maybe that would just help me frame it better.

Tammy Anderson: Okay, sure. Go to Census.gov and under data click data and developers. So Census.gov, data, and developers, and that takes you to the Developer's page.

And then if you click on available APIs, and then if you scroll down you will see there is the Census Geocoder Services and the Census TIGERweb Geo Services REST API. So those can maybe help with your geo coding issues.

(Question #16): One was the TIGERweb Geo Services Rest API and what was the other one?

Maureen Brauning: The one right above it, Census Geocoding Services.

(Question #16): Geocoding?

(Maureen Brauning): Yes.

(Question #16): Ok. So it is a fair understanding that the ACS API that you are referring to is mostly to see the tabular information in Excel or CSE based data, correct.

Maureen Brauning: The API is really for developers to use the data in their own applications. I mean if you want all the data, then I would recommend the FTP side to download the vast majority of data. But if you just want certain chunks of it or display on the fly, that's what the API is really for.

(Question #16): Okay, thanks. Appreciate it.

Frances Alonzo: Yes. Okay, and we have time for one more question.

Coordinator: Thank you. The last question comes from (name removed) from the Center for Rural Communities. Your line is open.

(Question #17): Sorry, this is a repeat question. I just wanted to ask one more thing about place codes. It seems that I have a large file here of all the place codes of Census places. And there are quite a few of them that have - that are both county subdivisions and incorporated places with the same code.

And I am just wondering, how do you know which one you are pulling? And I guess, what is the difference?

Maureen Brauning: In the API that would be determined by what you use in your "for" statement, whether you use place or county subdivision. So if you are using

county subdivision you would get the county subdivision that matched to that five-digit place code as opposed to if you would get the five-digit place code.

(Question #17): And then also I heard him mention something about Python. And I also wanted to mention that for our - recently someone released a packaged called Pyden Census which is capable of writing APIs and pulling all the data directly into R so you can use that to analyze it. As well as, it can pull the spatial data and use GIS in R. Anyway, I think that's all. Thanks.

Frances Alonzo: Okay, thank you so much for the call.

Coordinator: That was the last question in the queue. Thank you.

Javier Gomez: Thank you very much to everyone who joined today.

Coordinator: And that concludes today's conference. Thank you for your participation. You may disconnect at this time. Speakers, please stand by for your post conference.

END