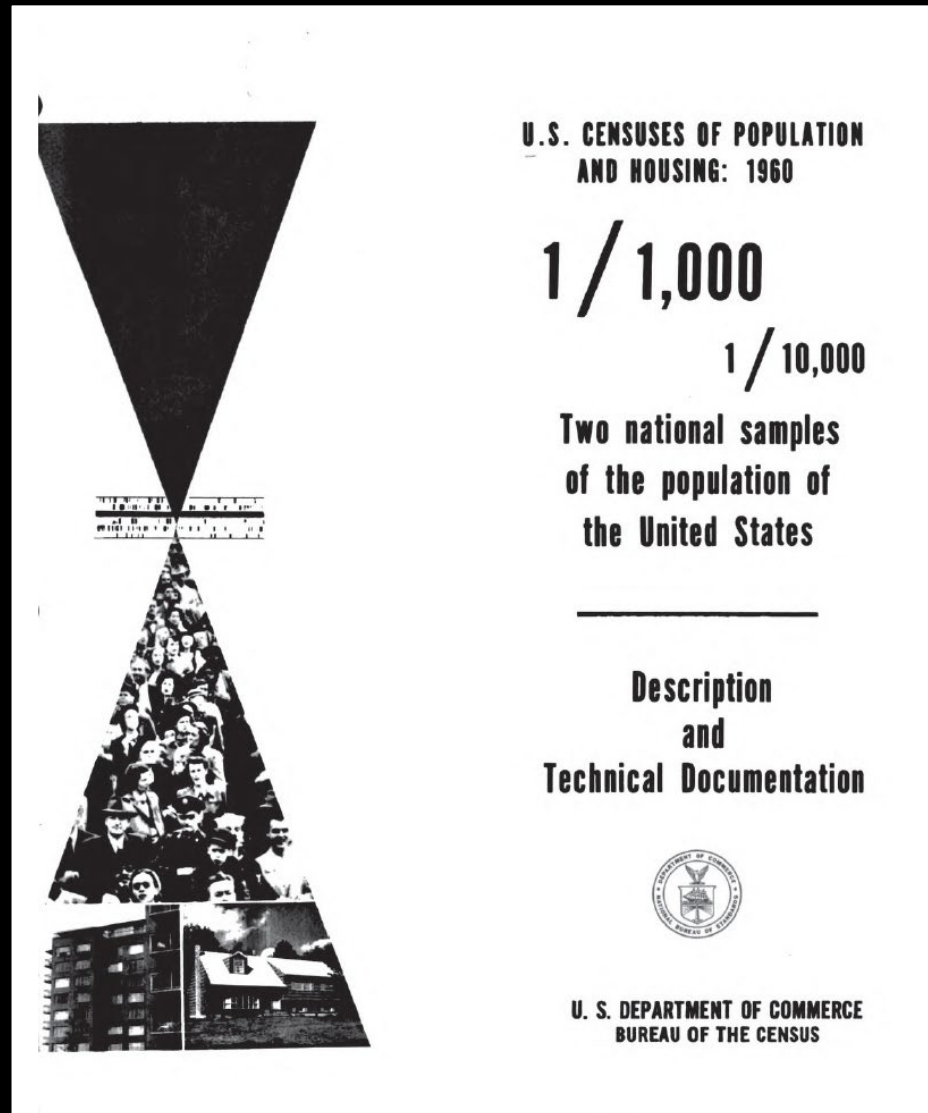


Univac 1105 at Census, 1960

The Invention of Microdata: The 1960 Census Samples



Cover, 1960 Census Microdata Codebook

**UNIVAC
MAGNETIC TAPE**
saves 90% in storage
and handling
over punched cards

Remington Rand Univac Electronic Computers Now Make Available...

FASTER FACT-POWER FOR MANAGEMENT

Reels of magnetic tape are utilized with REMINGTON RAND ELECTRONIC COMPUTER SYSTEMS solving intricate computations for business, for industry, for science, for government. They operate at speeds that put facts at management's fingertips with breathtaking rapidity. They give management *today* data which it formerly had to wait months to obtain.

One inch of magnetic tape, the input medium for Remington Rand UNIVAC, holds even more information than a punched card. One reel holds 1,400,000 numbers or letters. Two 4-drawer tabulating-card files, storing more than 20,000 cards, are compressed into a single eight-inch reel.

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You expect leadership from the leader . . . and Remington Rand machines, using magnetic tape in addition to all other input media, offer the greatest variety of equipment for every computing job.

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THE FIRST NAME IN BUSINESS ELECTRONICS **Remington Rand**

Distributed on 13 Univac Tapes
(or 180,000 punch cards)

School enrollment, 1950 Census

Table 42.—SCHOOL AND KINDERGARTEN ENROLLMENT, BY AGE, FOR THE UNITED STATES, URBAN AND RURAL

[Based on 20-percent sample. For totals of age groups from complete count, see table 38. Percent not shown where less than 0.1 or where base is less than 100.]

Age	United States			Urban			Rural nonfarm		
	Population	Enrolled		Population	Enrolled		Population	Enrolled	
		Number	Percent		Number	Percent		Number	Percent
SCHOOL ENROLLMENT									
Total, 5 to 29 years old.....	58,708,860	28,984,985	49.4	35,928,820	17,178,935	47.8	12,853,930	6,296,570	49.0
5 and 6 years.....	5,490,200	2,160,160	39.3	3,156,225	1,297,670	41.1	1,301,890	480,065	36.9
7 to 13 years.....	16,801,950	16,077,270	95.7	9,363,045	9,002,225	96.1	3,921,845	3,744,725	95.5
14 and 15 years.....	4,267,680	3,963,575	92.9	2,332,850	2,211,225	94.8	963,525	887,380	92.1
16 and 17 years.....	4,175,195	3,104,265	74.4	2,334,415	1,839,365	78.8	924,350	649,040	70.2
18 and 19 years.....	4,344,325	1,400,700	32.2	2,686,440	980,435	36.5	932,590	238,415	25.6
20 to 24 years.....	11,440,095	1,480,745	12.9	7,680,440	1,215,615	15.8	2,352,865	188,195	8.0
25 to 29 years.....	12,189,415	798,270	6.5	8,375,405	632,400	7.6	2,456,865	108,750	4.4
KINDERGARTEN ENROLLMENT									
Total, 5 and 6 years old.....	5,490,200	898,970	16.4	3,156,225	742,835	23.5	1,301,890	111,695	8.6

The Power of Microdata

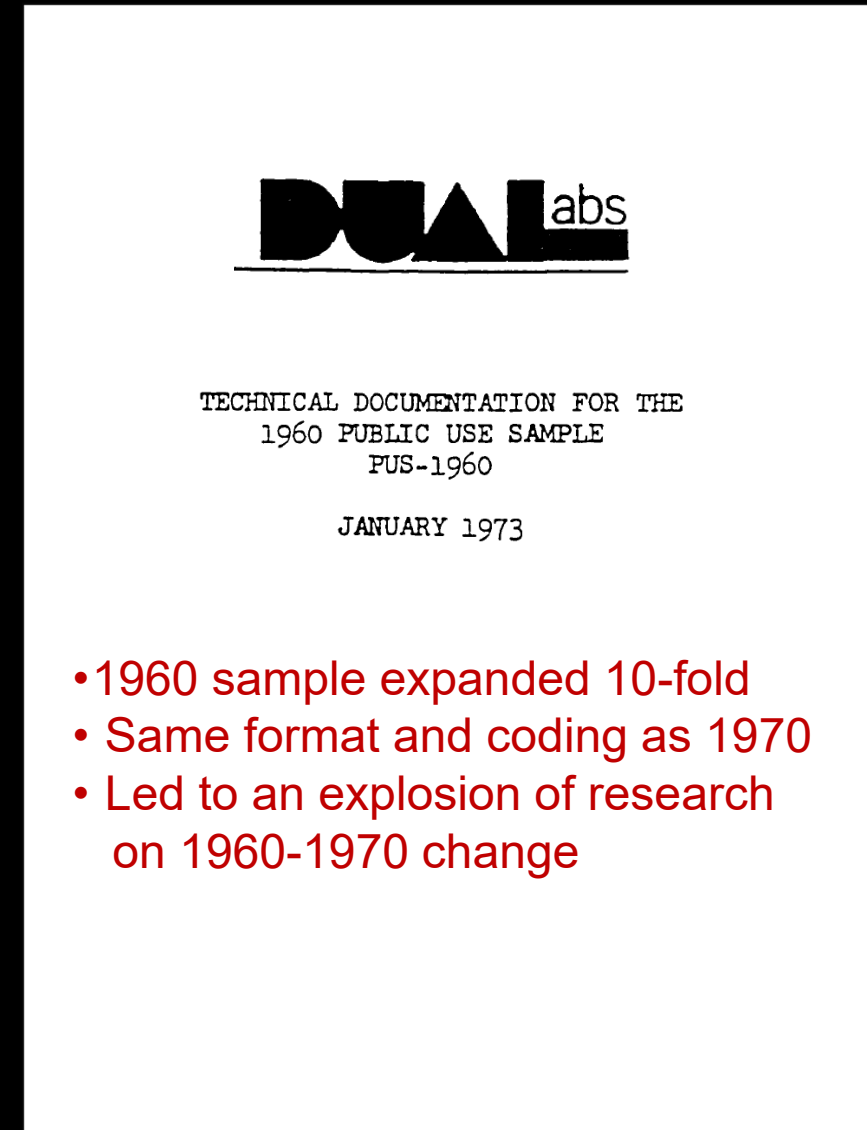
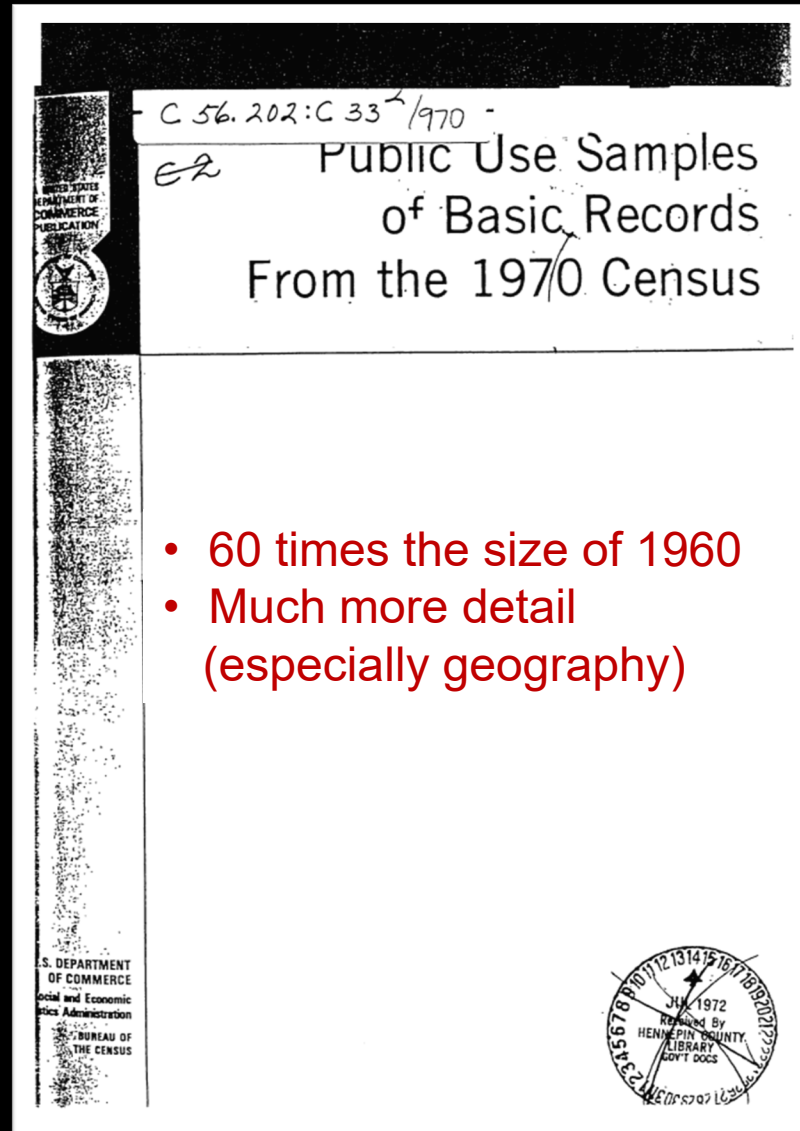
- **Customized measures:** Variables based on combined characteristics of family and household members, capitalizing on the hierarchical structure of the data
- **Multivariate analysis:** Analyze many individual, household, and community characteristics simultaneously
- **Interoperability:** Harmonize data across time and space

Age classification for school enrollment in published U.S. Census

1980	1990	2000
5-6	5-6	5-9
7-13	7-9	10-14
14-15	10-14	15-17
16-17	15-17	

Relationship	Age	Sex	School	Occupation
Head/Householder	34	Male	No	Operative and kindred worke...
Spouse	34	Female	No	Telegraph operators
Child	11	Male	Yes	N/A (blank)
Child	7	Female	Yes	N/A (blank)
Parent-in-Law	76	Female	No	N/A (blank)
Head/Householder	48	Male	No	Carpenters
Spouse	47	Female	No	Bookkeepers
Child	13	Male	Yes	N/A (blank)
Child	11	Female	Yes	N/A (blank)
Head/Householder	54	Female	No	Stenographers, typists, and ...
Parent	82	Male	No	N/A (blank)
Head/Householder	64	Male	No	Laborers (nec)
Spouse	67	Female	No	N/A (blank)
Child	39	Male	No	N/A (blank)
Head/Householder	46	Male	No	Hucksters and peddlers
Spouse	42	Female	No	Barbers, beauticians, and m...
Child	18	Male	No	Laborers (nec)
Child	14	Male	Yes	N/A (blank)

The 1970 Public Use Samples



Extending the Series Backwards



Preston

1900 Public Use Sample

- Microfilm became public in 1972 under 72-year rule
- Sample created 1976-1980 at University of Washington
- 100,000 cases (1-in-760 sample)

1910 Public Use Sample

- Microfilm released 1982
- Created 1983-1989 at the University of Pennsylvania
- 366,000 cases (1-in-250)



Winsborough

1940-1950 Public Use Microdata Samples

- Created 1978-1984 at Census Bureau and University of Wisconsin, with NSF funding
- 3.3 million cases (1-in-100 samples)
- Budget of \$7.4M (32.5M in 2021 \$)

1989: 1880 Public Use Microdata Sample

Page No. 73

Supervisor's Dist. No. 2

Enumeration Dist. No. 96

Note B.—All persons will be included in the Enumeration who were living on the 1st day of June, 1880. No others will. Children BORN SINCE June 1, 1880, will be OMITTED. Members of Families who have DIED SINCE June 1, 1880, will be included.

Note C.—Questions Nos. 13, 14, 22 and 23 are not to be asked in respect to persons under 10 years of age.

SCHEDULE 1.—Inhabitants in 1st District Princeton Township Borough of Princeton, in the County of Merse, State of New Jersey, enumerated by me on the 1st day of June, 1880.

Received July 22, 1880.

119

Chas H. Hudnut

Enumerator.

In Cities	Name of Street	House Number	Dwelling house numbered in order of visitation.	Families numbered in order of visitation.	The Name of each Person whose place of abode, on 1st day of June, 1880, was in this family.	Personal Description.			Relationship of each person to the head of this family—whether wife, son, daughter, servant, boarder, or other.	Civil Condition.				Occupation.		Is the person (on the day of the Enumerator's visit) sick or temporarily disabled, so as to be unable to attend to ordinary business or duties? If so, what is the sickness or disability?	Health.					Education.			Nativity.		
						Color—White, W.; Black, B.; Mexican, M.; Chinese, C.; Indian, I.	Sex—Male, M.; Female, F.	Age at last birthday prior to June 1, 1880. If under 1 year, give months in fractions, thus: $\frac{1}{2}$.		Single, /	Married, /	Widowed, /	Divorced, D.	Profession, Occupation or Trade of each person, male or female.	Blind, /		Deaf and Dumb, /	Idiotic, /	Insane, /	Maimed, Crippled, Bedridden, or otherwise disabled, /	Attended school within the Census year, /	Cannot read, /	Cannot write, /	Place of Birth of this person, naming State or Territory of United States, or the Country, if of foreign birth.	Place of Birth of the Father of this person, naming the State or Territory of United States, or the Country, if of foreign birth.	Place of Birth of the Mother of this person, naming the State or Territory of United States, or the Country, if of foreign birth.	
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		
1	165-188	Schuck Daniel	M	M	40					1		Laborer	✓										New Jersey	New Jersey	New Jersey		
2		Phoebe	M	F	32		wife		1			Keeping House									1	1	New Jersey	N.J.	N.J.		
3	166-189	Johnson Clara	M	F	5-1						1	Keeping House									1	1	New Jersey	N.J.	N.J.		
4		June	M	F	29		Daughter		1			Servant											New Jersey	Princeton	N.J.		
5		Mary E	M	F	21		Daughter		1			at Home											New Jersey	Princeton	N.J.		
6		Georgia	M	F	14		Daughter		1			at Home								1			New Jersey	Princeton	N.J.		
7		Viola	M	F	2		S. Daughter																New Jersey	Princeton	N.J.		
8		Nancy E	M	M	10 $\frac{1}{2}$		S. Daughter																New Jersey	Princeton	N.J.		

1990
1980
1970
1960
1950
1940
1910
1900
1880



1991: Nine Census Years, All Incompatible

Relationship Variable (part):

1900 Public Use Sample

72 categories

0	P03	REL	RELATIONSHIP TO HEAD	COLS	9-11
		100	HEAD OF HOUSEHOLD	21336	21.243
		108	PARTNER / COHEAD	173	.172
		120	WIFE OF HEAD	16665	16.592
		128	WIFE OF PARTNER/COHEAD	1	.001
		129	SECOND OR THIRD WIFE OF HEAD	3	.003
		130	CHILD OF HEAD	46174	45.973
		131	STEP-CHILD OF HEAD	755	.752
		132	ADOPTED CHILD OF HEAD	103	.103
		133	SON/DAUGHTER-IN-LAW	466	.464
		136	FOSTER CHILD / FOUNDLING	23	.023
		140	HUSBAND / NOT HEAD	17	.017
		200	RELATIVE - UNSPECIFIED	23	.023
		210	PARENT OF HEAD	920	.916
		211	STEP-PARENT OF HEAD	24	.024
		213	PARENT-IN-LAW OF HEAD	568	.566
		220	BROTHER/SISTER OF HEAD	1325	1.319
		221	STEP/HALF BROTHER/SISTER	12	.012
		223	BROTHER/SISTER-IN-LAW	688	.685
		230	NIECE/NEPHEW	822	.818
		232	ADOPTED NIECE/NEPHEW	1	.001
		233	NIECE/NEPHEW-IN-LAW	4	.004
		237	GRAND NIECE/NEPHEW	15	.015
		240	COUSIN	108	.108
		243	COUSIN-IN-LAW	1	.001
		249	SECOND COUSIN	5	.005
		250	AUNT/UNCLE OF HEAD	99	.099
		253	AUNT/UNCLE-IN-LAW	2	.002
		260	GRANDPARENT OF HEAD	27	.027
		261	STEP-GRANDPARENT	1	.001
		263	GRAND-PARENT-IN-LAW	2	.002
		270	GRANDCHILD OF HEAD	1541	1.534
		271	STEP-GRANDCHILD	33	.033

NAME: RELATE

ITEM DESCRIPTION: Detailed relationship to household head
RECORD TYPE: P
BEGIN: 11
SIZE/SCALE: 2
UNIVERSE: All persons in households
SEE GLOSSARY TERMS: Relationship
SOURCE: Columns 8 and A of the population schedule

Relationship Variable: 1940 Public Use Sample

23 categories

CODE	DESCRIPTION
1	Head
2	Wife
3	Son, daughter
4	Stepson, stepdaughter
5	Son-in-law, daughter-in-law
6	Grandson, granddaughter
7	Father, mother, stepfather, stepmother
8	Father-in-law, mother-in-law
9	Grandfather, grandmother, including in-laws
10	Brother, sister, stepbrother, stepsister, half brother, half sister
11	Brother-in-law, sister-in-law
12	Uncle, aunt, including in-laws
13	Nephew, niece, including in-laws
14	Cousin, including in-laws
15	Relative of head, n.e.c.
16	Roomer, boarder, lodger or his/her relative
17	Domestic employee
18	Nondomestic employee
19	Relative of employee
20	Partner or friend and his/her relatives
21	Ward, foster child
22	Nonrelative of head, n.e.c.
99	Inap. (group quarters)

Relationship Variables: 1980 Public Use Sample

20 unique categories

RELAT1	2	2
		Relationship
00		Householder
		Family member other than householder:
01		Spouse
02		Child
03		Brother or sister
04		Parent
05		Other relative (See RELAT2)
		Person not related to householder:
06		Roomer or boarder
07		Partner or roommate
08		Paid employee
09		Other nonrelative
		In group quarters:
10		Inmate
11		Noninmate

RELAT2	1	4
		Detailed Relationship
0		N/A (person not listed as "other relative" of householder)
1		Son-in-law or daughter-in-law
2		Grandchild
3		Father-in-law or mother-in-law
4		Brother-in-law or sister-in-law
5		Nephew or niece
6		Grandparent
7		Uncle or aunt
8		Cousin
9		Other person related by blood or

census microdata for social and economic research

- ✓ Harmonized codes
- ✓ Consistent record layout
- ✓ Integrated documentation
- ✓ No loss of information.

- ✓ Harmonized codes
- ✓ Consistent record layout
- ✓ Integrated documentation
- ✓ No loss of information.

Two Key IPUMS innovations

1991: First structured metadata system for data integration

1995: First interactive data access system, enabling pooling multiple datasets, variable selection, and subsetting

RELATE.TRN													
Relationship													
##													
1880 P	21	23	79										
1900 P	09	11	28										
1910 P	14	16											
1940 P	11	14	97										
1950 P	16	20	63										
1960 P	01	02											
1970 P	01	02	105	1									
1980 P	02	04	140										
1990 P	09	10	184										
##													
				IPUMS	1880	1900	1910	1940	1950	1960	1970	1980	1990
#													
HEAD & RELATIVES (1-10):													
Head/Householder	01	01											
	01	01	100	100	100	019901999			0-	0-	000	00	
	01	01								00	00		
Spouse	02	01											
	02	01	120	120	120	029902999			1-	1-	010	01	
Husband, not Head	02	01	140	140									
2nd/3rd Wife (PG)	02	02	121	129									
Child	03	01											
Incl Adopted, Step	03	01	130	130	130	039903999			2-	2-	020	02	
	03	01								20	20		
(1970 screw-ups)	03	01									22		
(1970 screw-ups)	03	01									26		
Adopted Child	03	02	132	132	132								
Stepchild	03	03	131	131	131	049904999							03
Adopted, ns	03	04			280								
Child-in-law	04	01											
	04	01	133	133	133	059905999			30	30	051		*
Step Child-in-law	04	02	134		134								
Parent	05	01											
	05	01	210	210	210	079907999			32	32	040	05	
Stepparent	05	02	211	211	211								
Parent-in-Law	06	01											
	06	01	213	213	213	089908999			33	33	053		*
Stepparent-in-law	06	02	214		214								
Sibling	07	01											
	07	01	220	220	220	109910999			34	34	030	04	
Step/Half/Adopted Sibling	07	02	221	221	221								
	07	02			222								
	07	02			223								
Sibling-in-Law	08	01											
	08	01	223	223	224	119911999			35	35	054		*
Step/Half Sib-in-law	08	02			225								
	08	02	222		226								
Grandchild	09	01											
	09	01	270	270	270	069906999			31	31	052	06	
Adopted Grandchild	09	02	272	272	272								
Step Grandchild	09	03	271	271	271								
Grandchild-in-law	09	04	273	273	273								
Other Relatives	10	00	*	*	*	*	*	*	*	*	*	*	*
Other Relatives, ns	10	01	200	200	299								*
Grandparent	10	11	260	260	260	000000000					056		*

1991: First structured metadata system for data integration

RELATE.TRN
Relationship

##			
1880 P	21	23	79
1900 P	09	11	28
1910 P	14	16	
1940 P	11	14	97
1950 P	16	20	63
1960 P	01	02	
1970 P	01	02	105 1
1980 P	02	04	140
1990 P	09	10	184
##			

1991: First structured metadata system for data integration

IPUMS 1880 1900 1910 1940 1950 1960 1970 1980 1990

HEAD & RELATIVES (1-10):
Head/Householder

Spouse
 Husband, not Head
 2nd/3rd Wife (PG)
Child
 Incl Adopted, Step
 (1970 screw-ups)
 (1970 screw-ups)
 Adopted Child
 Stepchild
 Adopted, ns
Child-in-law
 Step Child-in-law
Parent

01 01									
01 01	100	100	100	019901999	0-	0-	000	00	
01 01					00	00			
02 01									
02 01	120	120	120	029902999	1-	1-	010	01	
02 01	140	140							
02 02	121	129							
03 01									
03 01	130	130	130	039903999	2-	2-	020	02	
03 01					20	20			
03 01						22			
03 01						26			
03 02	132	132	132						
03 03	131	131	131	049904999				03	
03 04			280						
04 01									
04 01	133	133	133	059905999	30	30	051	*	
04 02	134		134						
05 01									

Input data locations

Data quality flag locations

Original codes

Standardized composite code

Standardized labels

Excerpt from budget justification

1991 IPUMS proposal to NSF

Materials and Supplies. The largest category of supplies is 9-track tapes. Despite their inefficiency for very large data sets, 9-track tapes are presently the only medium used by the Inter-University Consortium for importing and exporting data. Accordingly, we are requesting funds for 150 tapes in the first year and 300 tapes in the final year. For internal storage and backup we will rely on 2 Gbyte Exabyte tape cartridges.

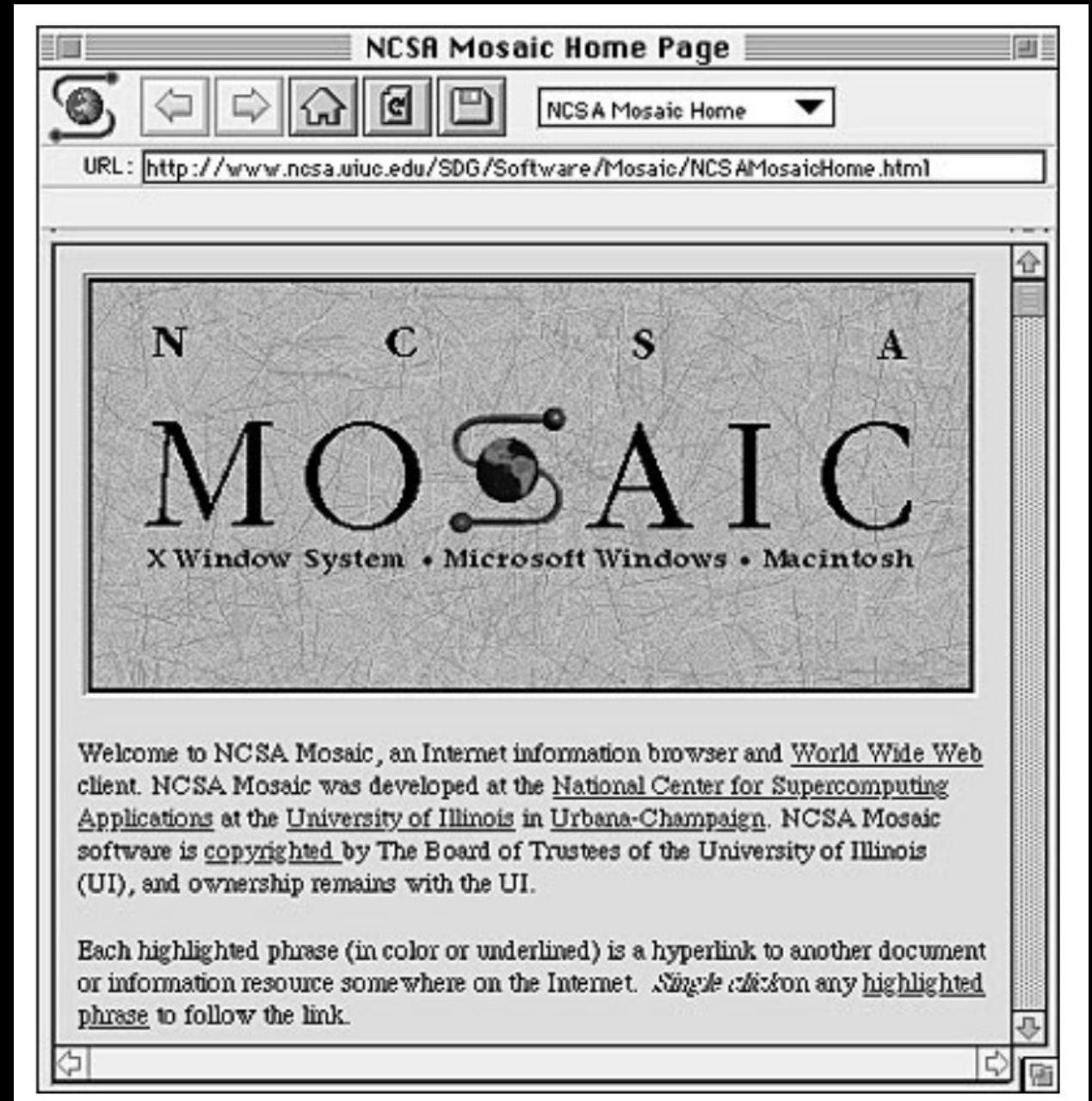
Description of supplies	Year 1	Year 2	Year 3	Total
450 2400' 6250BPI 9-Track tapes	2,048	-	4,095	6,143
200 2 Gbyte Exabyte tape cartridges	600	360	240	1,200
300 1.44 Mbyte 3.5" diskettes	189	189	189	567
Printing supplies	260	260	260	780
General office supplies	500	525	550	1,575
Total	3,597	1,334	5,334	10,265

FTP log for November 19, 1993:

First IPUMS data dissemination via anonymous FTP

Mon	Nov	8	10:01:38	1993	1	quads.uchicago.edu	742	/pub/gzip/README	a	_
Mon	Nov	8	10:21:00	1993	1116	quads.uchicago.edu	5552885	/raw1850/raw1		
Tue	Nov	9	22:57:22	1993	1	ukanaix.cc.ukans.edu	872	/README	a	_ o a W
Tue	Nov	9	22:58:56	1993	1	ukanaix.cc.ukans.edu	6455	/raw1850/coll1850		
Wed	Nov	10	11:13:53	1993	1	ukanaix.cc.ukans.edu	872	/README	a	_ o a W
Mon	Nov	15	07:43:06	1993	4	131.130.42.102	3460	/nfs/legohead/files0/h		
Mon	Nov	15	10:33:32	1993	1	ukanaix.cc.ukans.edu	872	/README	a	_ o a W
Mon	Nov	15	13:09:51	1993	1	larry.hist.umn.edu	3460	/nfs/legohead/files		
Mon	Nov	15	19:56:26	1993	1	ukanaix.cc.ukans.edu	872	/README	a	_ o a W
Wed	Nov	17	18:29:02	1993	1	legohead.hist.umn.edu	742	/pub/gzip/README		
Fri	Nov	19	11:12:12	1993	876	ucrACL.ucr.edu	8909034	/pub/ipums/1880/ip		
Fri	Nov	19	11:47:55	1993	1	larry.hist.umn.edu	36434	/nfs/legohead/file		
Fri	Nov	19	14:52:40	1993	12866	ucrACL.ucr.edu	103703060	/pub/ipums/1880		
Sat	Nov	20	02:17:29	1993	1	ukanaix.cc.ukans.edu	28	/pub/.message	a	_ o
Sat	Nov	20	02:18:39	1993	1	ukanaix.cc.ukans.edu	6455	/raw1850/coll1850		
Sat	Nov	20	16:53:06	1993	1	ukanaix.cc.ukans.edu	872	/README	a	_ o a W
Sat	Nov	20	16:54:10	1993	1	ukanaix.cc.ukans.edu	18	/pub/README	a	_ o

On November 11, 1993,
eight days before the first
IPUMS Internet download, an
undergraduate from the
University of Illinois released
the first successful web
browser for a PC:
NCSA Mosaic 1.0



Welcome to the Social History Research Lab!

University of Minnesota

This web site currently contains the data and documentation for the **Integrated Public Use Microdata Series (IPUMS)**. The **IPUMS** is a database consisting of 23 samples of the U.S. Census from 1850 to 1990. The **IPUMS** assigns the different samples consistent codes and integrates their documentation. At present, you may only download compressed **IPUMS** data files. To obtain a DOS decompression program click [here](#).

If you need uncompressed data or have any other questions about the IPUMS database, contact us at **ipums@atlas.socsci.umn.edu**

If you have problems, questions, or suggestions about this page, send e-mail to **block@torgo.hist.umn.edu**

The User's Guide for the IPUMS is available online in Word 6.0 format (see below). This document is 800 pages long, and is contained in 61 separate files. A printed version is available from us for \$30; contact **ipums@atlas.socsci.umn.edu**

IPUMS DATA FILES:

To download an IPUMS sample, just click on it:

[1850 sample \(6.9M\)](#)

[1880 sample \(21.1M\)](#)

[1900 sample \(3.6M\)](#)

[1910 sample \(14.0M\)](#)

[1920 sample \(14.4M\)](#)

[1940 sample \(62.4M\)](#)

[1950 sample \(72.8M\)](#)

[1960 sample \(77.4M\)](#)

March 10, 1995:
The first IPUMS
website

Among the first
15,000



IPUMS Team, 1995

IPUMS Data Extract

Sample Selection

[Reset Values](#)[Continue To Variable Selection](#)What is your email address?

[Census Year](#)

NOTE: IPUMS-95 contains only the 1970 5% and 15% state and county group samples, the 1980 B sample, and the 1990 1% sample.

- ☐ 1850 Sample
- ☐ 1880 Sample
- ☐ 1900 Sample
- ☐ 1910 Sample
- ☐ 1920 Sample
- ☐ 1940 Sample
- ☐ 1950 Sample
- ☐ 1960 Sample
- ☐ 1970 5% State Sample
- ☐ 1970 15% State Sample
- ☐ 1980 B Sample
- ☐ 1990 1% Sample

[Sample Density](#)

- ☒ Tiny
- ☐ Small
- ☐ Regular

[File Type](#)

- ☐ Flat
- ☒ Hierarchical

[Data Quality Flags](#)

- ☐ Include all data quality flags

November 5, 1995:
Interactive data extract
system

Step 1:
select census
years, sample
density, and
desired format

IPUMS Data Extract Variable Selection

Household Variables

<input type="checkbox"/> <i>Technical Variables</i>		
<input type="checkbox"/> RECTYP	Record type	
<input type="checkbox"/> YEAR	Census year	
<input type="checkbox"/> DATANUM	Data set number	
<input type="checkbox"/> SERIAL	Household serial number	
<input type="checkbox"/> NUMPREC	Number of person records following	
<input type="checkbox"/> SUBSAMP	Subsample number	
<input type="checkbox"/> HHWT	Household weight	
<input type="checkbox"/> NUMPERHH	Number of person in household	
<input type="checkbox"/> DWSIZE	Dwelling size	
<input type="checkbox"/> NMEMBERS	Number of members in sample unit	
<input type="checkbox"/> NUMHH	Number of households in dwelling	
<input type="checkbox"/> NUMHHTAK	Number of households sampled from dwelling	
<input type="checkbox"/> UNREL	Unrelated persons in household	
<input type="checkbox"/> SLPERNUM	Sample line person number	
<input type="checkbox"/> SELFWTHH	Self-weighting sample identifier	
<input type="checkbox"/> <i>Location Characteristics</i>		
<input type="checkbox"/> REGION	Census region and division	<input type="checkbox"/> range
<input type="checkbox"/> STATEICP	State (ICPSR code)	<input type="checkbox"/> range
<input type="checkbox"/> STATEFIP	State (FIPS code)	<input type="checkbox"/> range

Step 2:
select variables

IPUMS Data Extract Case Selection

Clear

Submit

Household Variables

[Region](#)

- ☐ New England
- ☐ Middle Atlantic
- ☐ East North Central
- ☐ West North Central
- ☐ South Atlantic
- ☐ East South Central
- ☐ West South Central
- ☐ Mountain
- ☐ Pacific
- ☐ Military/Military reservations
- ☐ PUMS boundaries cross state lines
- ☐ State not identified

[State](#)

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida

Person Variables

[Age](#)

from 0 to All

[Sex](#)

- ☐ Male
- ☐ Female

[Race](#)

- ☐ White
- ☐ Black/Negro
- ☐ American Indian
- ☐ Chinese

Step 3:
Subset
population

RELATE - **P 48-49 General**

P 48-51 Detailed

Relationship to household head/householder

Availability:

1850	1860	1870	1880	1900	1910	1920	1940	1950	1960	1970	1980	1990
			X	X	X	X	X	X	X	X	X	X

Universe:

All persons.

Codes and Frequencies

Description:

RELATE describes an individual's relationship to the head of household or householder. Beginning in 1880, data on household relationship was asked of every person. The *general* relationship code is reasonably comparable across years. The *detailed* code makes distinctions that cannot be made in all years.

The relationship codes are divided into two categories—relatives (codes 1-10) and non-relatives (codes 11-12). The codes for relatives are self-explanatory; the non-relative codes are divided into three groups: "Partner, Friend, Visitor," roughly described as persons who do not pay or work for their accommodations (unless they share ownership), "Other Non-Relatives" including those persons paying or working for accommodations, and "Institutional Inmates." See the comparability discussion for further information about the coding scheme.

Comparability:

The general code is comparable across all years. Users should note, however, that there are some fundamental differences between the early period (before 1940) and the later period (1940-1990). Group quarters residence is a primary distinction in the relationship variable for the later period, but before 1940 relationship to head was recorded regardless of group quarters status. Persons classified as related to the head (codes 1 through 10) in the early period would have been classified in the "Other non-relative" category based on their group quarters status in the later years. We decided not to impose consistency because it would have resulted in the loss of too much information in the early period.

Users may recode RELATE for higher comparability, but we recommend caution because a recode may lose considerable information, changing what were considered ordinary households in the early years into group quarters. To impose the 1970 group quarters definition on all years, create

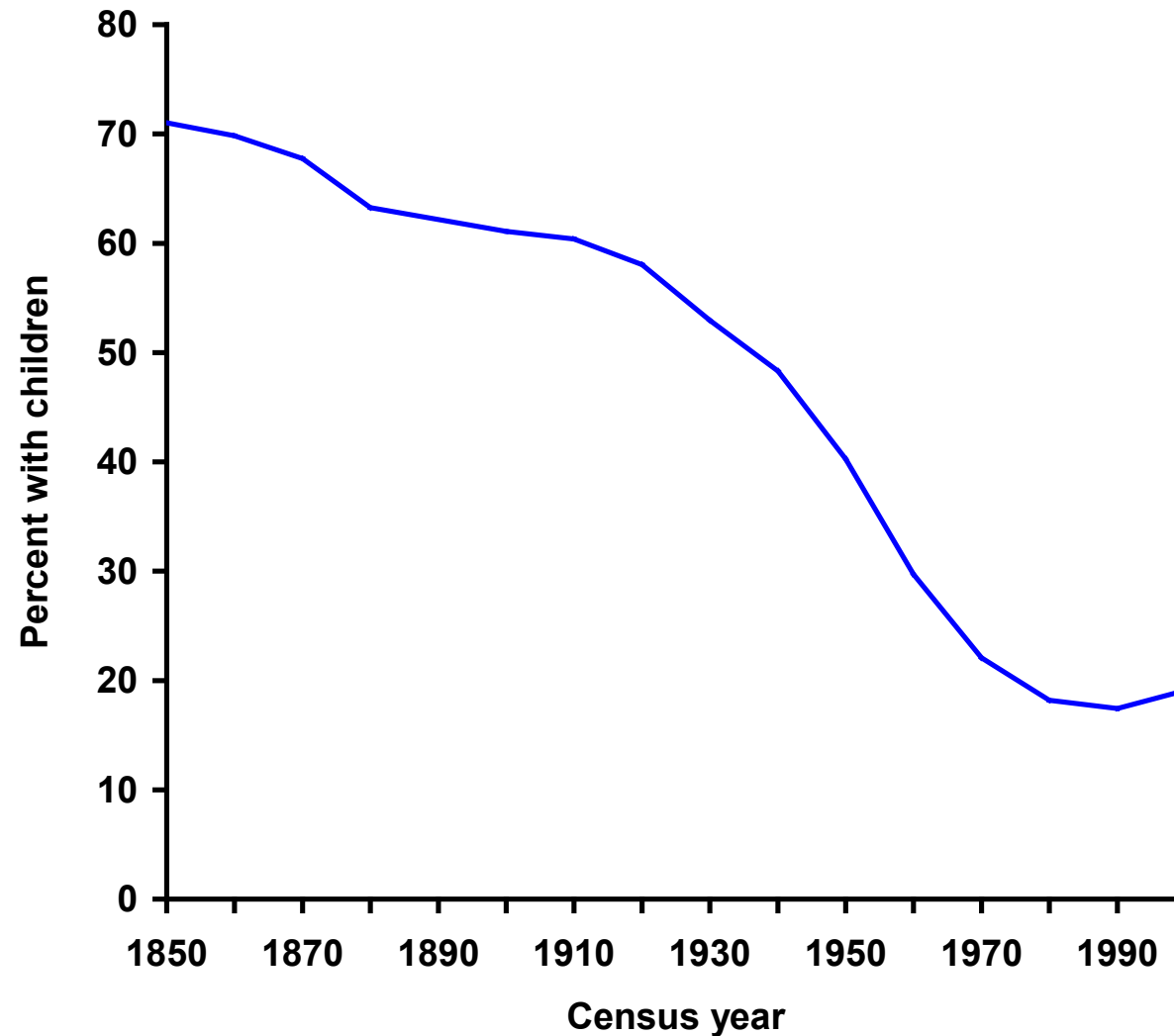
1997:

Hypertext
variable-level
documentation
accessible from
every stage of
the extract
system

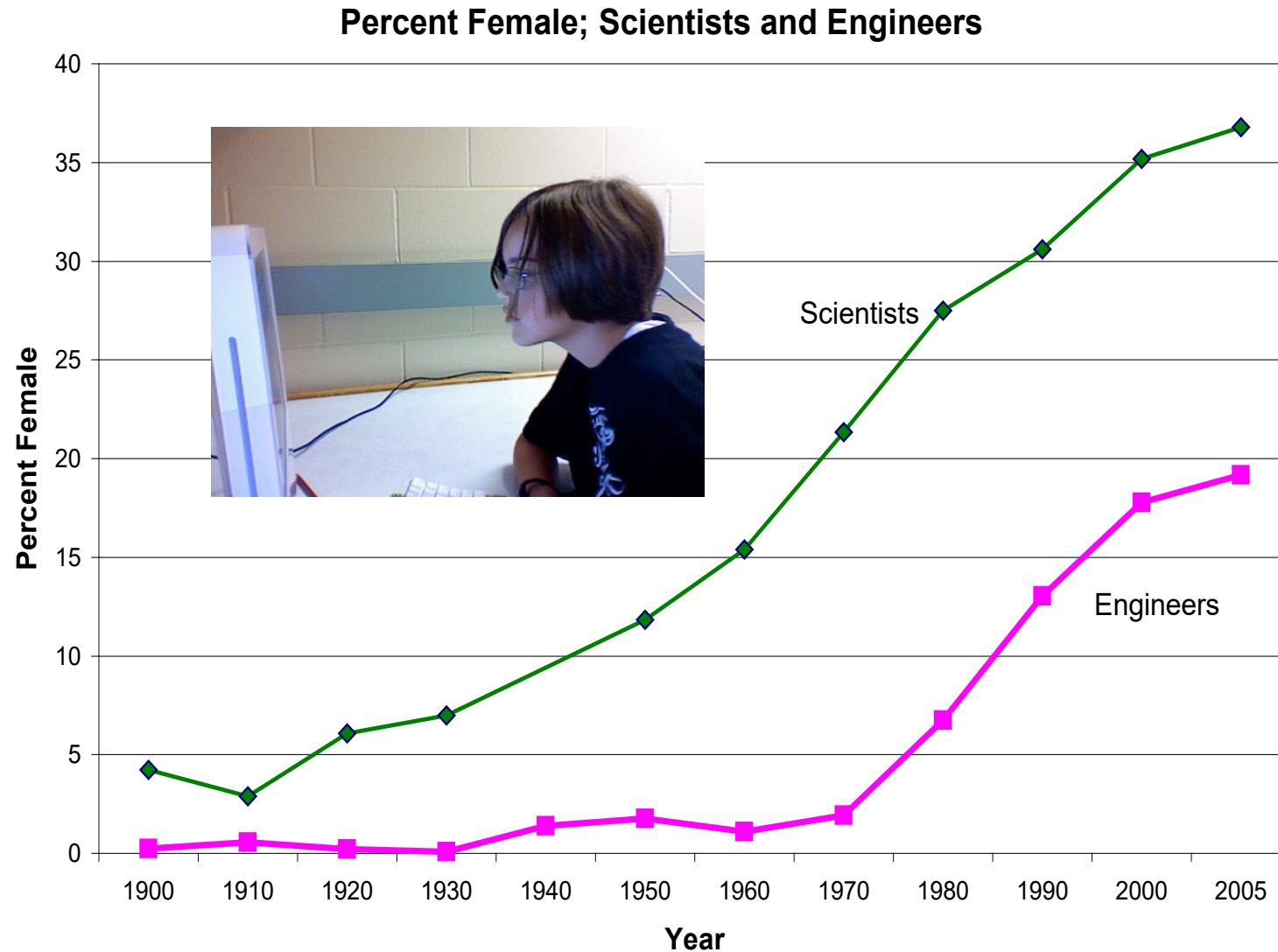
1992-2006

- Missing census years added
(1850, 1860, 1870, 1920, 1930)
- Preston samples expanded
(1900, 1910)

Percent of elderly (65+) residing with own children: United States, 1850-2000



IPUMS Graph from “A Century of Women in Science and Engineering,” 2006 History Day project by Abby Norling-Ruggles, age 12



IPUMS Big Data Developments of 1999

- IPUMS International
- Full-Count Microdata

1999: IPUMS International



IPUMS-*International*

International Integrated Microdata Access System

- [Sun Microsystems Provides Equipment Grant \(Press Release 4-26-00\)](#)
- [Announcement of Funding \(Press Release 9-15-99\)](#)
- [Summary](#)
- [Project Proposal to NSF](#)
- [Guidelines for Collaboration](#)
- [Data Security Policy](#)
- [Contacts](#)
- [Microdata Inventory](#)
- [Principles of Harmonization](#)
- [Prototype Application to Use the Microdata](#)
- [Task Force on the 2000 PUMS](#)



Major funding provided by the National Science Foundation

IPUMS-International is affiliated with the [IPUMS project](#)

IPUMS-International



Khartoum, CBS-Sudan







1973 Sudan Census Tapes arrive



Dhaka, Bangladesh
Bureau of Statistics











Participating Countries

IPUMS Full-Count Census Projects

Census	Project start	Major contributors
1880	1999	Church of Latter-Day Saints
1960-2000	2001	Census Bureau
1850	2009	FamilySearch
1940	2012	Ancestry
1860-1870	2015	Ancestry
1900-1930	2015	Ancestry/FamilySearch
1950	2021	Ancestry/FamilySearch



Church News

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

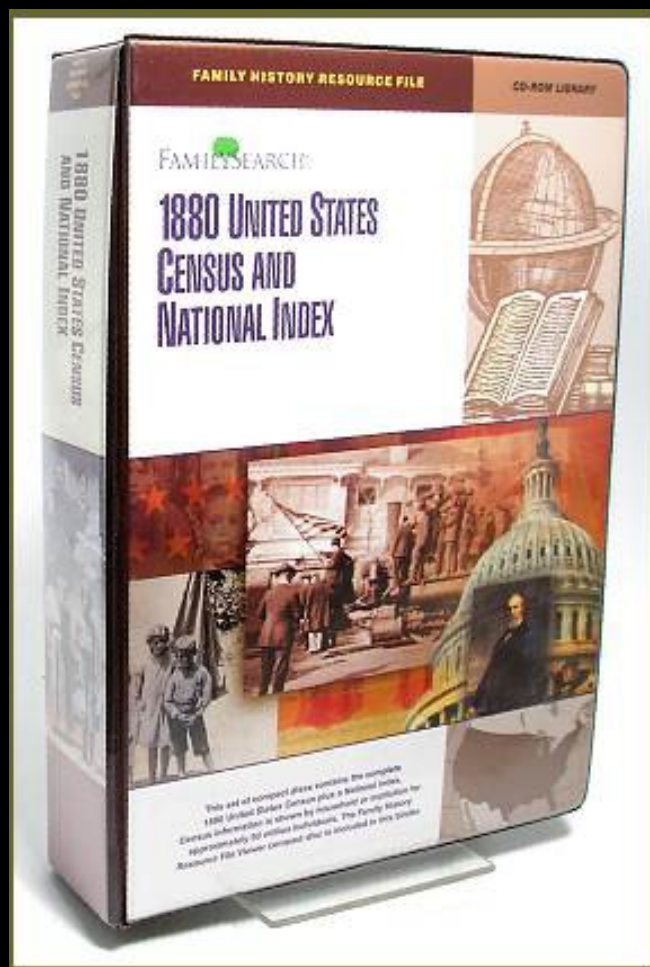
1880 U.S. Census to be available on CDs

Published: Saturday, May 26, 2001

The U.S. 1880 Census, the first ever U.S. census published in its complete format, has been automated and the 56-CD-ROM set will be available June 1.

The census extraction project was started 17 years ago and survived through changing intentions and technologies. After 11.5 million hours of work by dedicated extractors, the huge database was submitted to the Minnesota Population Center of the University of Minnesota, which partnered with the Family and Church History Department in the considerable work of cleaning up and completing the project. The record is composed of 35 data CDs, 20 Index CDs and a viewer CD and will sell for \$49.

With 50.5 million names, the record has twice as many names as the recently announced Ellis Island Records (24 million names), and has 12 times (6.5 million) as many names of African-Americans as the recently announced Freedman's Bank Records (480,000 names). It is a fully extracted record with every name indexed.



56 CD-ROM Set

Collaboration with the Latter-Day Saints



[illegible]

Presented to the
MINNESOTA
POPULATION CENTER
UNIVERSITY OF
MINNESOTA

For their exceptional contribution to the development of the

1880
UNITED STATES
CENSUS ON COMPACT
DISC

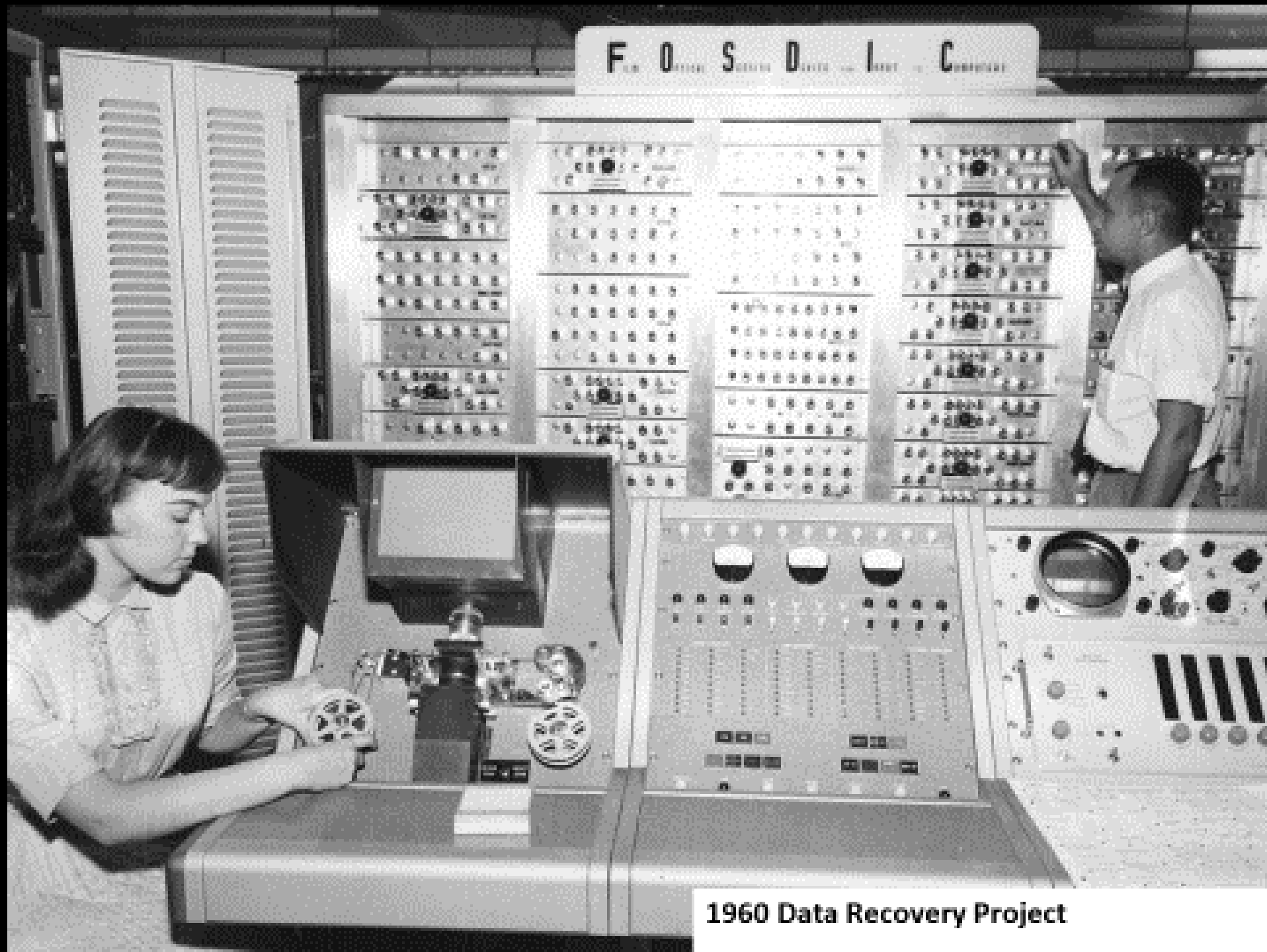
In Cooperation with
The Church of Jesus Christ
of Latter-day Saints

2002



2001: National Historical Census Files Project

1. Recover, clean, document, and verify the complete 1960, 1970, 1980, and 1990 long-form and short-form microdata
2. Create an IPUMS-compatible version of internal census microdata files from 1960 to the present



1960 Data Recovery Project

P22. Did this person work at any time last week?

Include part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm. Do not count own housework.

Yes ☐ No ☐

P23. How many hours did he work last week (at all jobs)?

(If exact figure not known, give best estimate)

1 to 14 hours <input type="checkbox"/>	40 hours <input type="checkbox"/>
15 to 29 hours <input type="checkbox"/>	41 to 48 hours <input type="checkbox"/>
30 to 34 hours <input type="checkbox"/>	49 to 59 hours <input type="checkbox"/>
35 to 39 hours <input type="checkbox"/>	60 hours or more <input type="checkbox"/>

P24. Was this person looking for work, or on layoff from a job?

Yes ☐ No ☐

P25. Does he have a job or business from which he was temporarily absent all last week because of illness, vacation, or other reasons?

Yes ☐ No ☐

P26. When did he last work at all, even for a few days?

(Check one box)

Working now <input type="checkbox"/>	1949 or earlier <input type="checkbox"/>
In 1960 <input type="checkbox"/>	
In 1959 <input type="checkbox"/>	Never worked <input type="checkbox"/>
1955 to 1958 <input type="checkbox"/>	
1950 to 1954 <input type="checkbox"/>	

P27. Occupation (Answer 1, 2, or 3)

1. This person last worked in 1949 or earlier ☐
This person has never worked ☐

OR

2. On active duty in the Armed Forces now ☐

OR

If this person worked last week, answer questions P28 and P29.

P28. What city and county did he work in last week?

If he worked in more than one city or county, give place where he worked most last week.

a. City or town

b. If city or town—Did he work inside the city limits? ☐ Yes ☐ No

c. County State

P29. How did he get to work last week?

(Check one box for principal means used last week)

Railroad <input type="checkbox"/>	Taxicab <input type="checkbox"/>	Walk only <input type="checkbox"/>
Subway or elevated <input type="checkbox"/>	Private auto or car pool <input type="checkbox"/>	Worked at home <input type="checkbox"/>
Bus or streetcar <input type="checkbox"/>	Other means—Write in: <input type="text"/>	

P30. Last year (1959), did this person work at all, even for a few days?

Yes ☐ No ☐

P31. How many weeks did he work in 1959, either full-time or part-time? Count paid vacation, paid sick leave, and military service as weeks worked.

(If exact figure not known, give best estimate)

13 weeks or less <input type="checkbox"/>	40 to 47 weeks <input type="checkbox"/>
14 to 26 weeks <input type="checkbox"/>	48 to 49 weeks <input type="checkbox"/>
27 to 39 weeks <input type="checkbox"/>	50 to 52 weeks <input type="checkbox"/>

P32. How much did this person earn in 1959 in wages, salary, commissions, or tips from all jobs?

Before deductions for taxes, bonds, dues, or other items.

(Enter amount or check "None." If exact figure not known, give best estimate.)

Form 60 PH-3

(5)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1960 CENSUS OF POPULATION AND HOUSING

CONFIDENTIAL—The Census is required by the United States Constitution and further authorized by 13 U.S.C. 5, 9, 141, 221-4. The law requires that the inquiries be answered completely and accurately, and guarantees that the information furnished will be accorded confidential treatment. The Census report cannot be used for purposes of taxation, investigation, or regulation.

Approval expires 12-31-60

2. Page No. from PH-1 or PH-2

Mark below

0 1 2 3 4 5 6 7 8 9

Hnd's

Tens

Units

3. If this is a continuation of a household started on a previous sheet, mark below and omit all "H" items on this sheet.

Continuation

H1. Sample key

A

GQ

(If GQ, fill H17-H18 and omit remaining "H" items)

H3. Type

House, apt., flat

Trailer

H4. Access

Direct from outside or common hall

Through another unit

H5. Kitchen or cooking

For exclusive use

Shared or none

H6. Condition

Sound

Deteriorating

Dilapidated

H7. Occupancy

Occupied

Vacant

Year-round

Migratory wkr

Seasonal

H8. Rooms

1

6

2

7

3

8

4

9

5

10+

H9. Water

Running water in structure

Hot and cold

Cold only

Rn. water outside

No running water

H10. Toilet

For exclusive use

Shared

None

H11. Bath

For exclusive use

Shared

None

H12. Owned or rented

Owned or being bought

Rented

No cash rent

H13. Vacancy status

For rent

For sale only

Rtd or sold not occ

For occasional use

Other vacant

FOR ALL UNITS AND GQ's (Omit in type Z ED's)

H17. Is this house—

On a city lot (or apt. bldg.)?

(Omit H18)

On a place of less than 10 acres?

(Ask H18a)

On a place of 10 or more acres?

(Ask H18b)

H18a. If occupied—

Last year, 1959, did sales of crops, livestock and other farm products from this place amount to—

\$250 or more?

Less than \$250 (or none)?

H18b. If occupied—

Last year, 1959, did sales of crops, livestock and other farm products from this place amount to—

\$50 or more?

Less than \$50 (or none)?

FOR ALL UNITS, OCCUPIED AND VACANT

In all following questions, use "house", "apartment", "flat", or "rooms", as appropriate, instead of "unit"

H19. How many bedrooms are in this unit?

No bedroom

1

2

3

4 or more

H20. About when was this house originally built?

In 1959 or 1960

1955 to 1958

1950 to 1954

1940 to 1949

1930 to 1939

1929 or earlier

H21. How is this unit heated?

Steam or hot water

Warm air furnace

Floor, wall, or pipeless furnace

Built-in electric units

Other means—with flue

Other means—no flue

Not heated

FOR OCCUPIED UNITS

H22. What fuel is used most for—

a. Heating this unit?

b. Cooking?

c. Heating water?

Coal or coke

Wood

Utility gas

Bottled, tank, or LP gas

Electricity

Fuel oil, kerosene, etc.

Other

No fuel used

H23. Is there a clothes washing machine in this unit?

Wringer or spinner

Automatic or semi-automatic

Washer-dryer combination

No washing machine

H24. Is there a clothes dryer in this unit?

Electric

Gas

No clothes dryer

H25. Is there television in this unit?

1 set

2 or more

No television

H26. Are there any radios in this unit?

1 set

2 or more

No radio

H27. Is there any air conditioning in this unit?

Room units: 1

2 or more

Central system

No air conditioning

H28. Is there a home food freezer separate from the refrigerator in this unit?

Yes

No

FOR OCCUPIED UNITS

H29-H34. (Omit)

H35. Is there a telephone on which people in this unit can be called?

Yes

No

H35a. If "Yes" in H35—

What is the telephone number?

H36. How many automobiles are owned or regularly used by people who live in this unit?

No auto

1

2

3 or more

Include company cars kept at home

H37. If this is a trailer—

Is the trailer mobile or has it been put on a permanent foundation?

Mobile

On permanent foundation

FOR VACANT UNITS

H38. How many months has this unit been vacant?

Up to 1 month

1 up to 2

2 up to 4

4 up to 6

6 or more

If "OWNED OR BEING BOUGHT" or "VACANT—FOR SALE ONLY" (Omit if 10 acres or more)

H39. (H14) Description of property

(From back page of questionnaire)

1 unit, no business

1 unit, with business

2 or more units

H40. (H15) If "1 unit, no business"—

About how much do you think this property would sell for on today's market?

(If vacant: What is the price asked for this property?)

Under \$5,000

\$5,000-7,400

7,500-9,900

10,000-12,400

12,500-14,900

15,000-17,400

17,500-19,900

20,000-24,900

25,000-34,900

35,000 or over

If transcribing from PH-2, copy from items H14, H15, H16 into H39, H40, H41.

If "RENTED" or "VACANT—FOR RENT"

H41. (H16) What is the monthly rent for this unit?

Enter to nearest dollar

\$ 0 1 2 3 4 5 6 7 8 9

Hnd's

Tens

Units

H42. (Omit in Z ED's) Does the rent include any land used for farming (or ranching)?

Yes

No

H43. In addition to rent, does renter pay for—

a. Electricity?

Yes

No

b. Gas?

Yes

No

c. Water?

Yes

No

H44. If "Yes" in H43 and if occupied—

What is the average monthly cost for—

\$ 0 1 2 3 4 5 6 7 8 9

Tens

Units

H45. In addition to rent, does renter pay for—

Oil, coal, wood or kerosene?

Yes

No

H46. If "Yes" in H45 and if occupied—

What is the total yearly cost for—

\$ 0 1 2 3 4 5 6 7 8 9

Hnd's

Tens

Units

H1

H3

H4

H5

H6

H7

H8

H9

H10

H11

H12

H13

H14

H15

H16

H-1

H17

H18

H19

H20

H21

H22

H23

H24

H25

H26

H27

H28

H35

H35a

H36

H37

H38

H39

H40

H41

H42

H43

H44

H45

H46

or none)? ☐

ales of crops,
arm products
to—

----- ☐

r none)? ☐

ICANT

ent", "flat",
unit"

----- ☐

----- ☐

----- ☐

----- ☐

----- ☐

Bottled, tank, or LP gas	<input type="radio"/>	-----	<input type="radio"/>	-----	<input type="radio"/>
Electricity	<input type="radio"/>	-----	<input type="radio"/>	-----	<input type="radio"/>
Fuel oil, kerosene, etc.	<input type="radio"/>	-----	<input type="radio"/>	-----	<input type="radio"/>
Other	<input type="radio"/>	-----	<input type="radio"/>	-----	<input type="radio"/>
No fuel used	<input type="radio"/>	-----	<input type="radio"/>	-----	<input type="radio"/>

H35a.
What

H23. Is there a clothes washing machine in this unit?	Wringer or spinner	<input type="radio"/>
	Automatic or semi-automatic	<input type="radio"/>
	Washer-dryer combination	<input type="radio"/>
	No washing machine	<input type="radio"/>

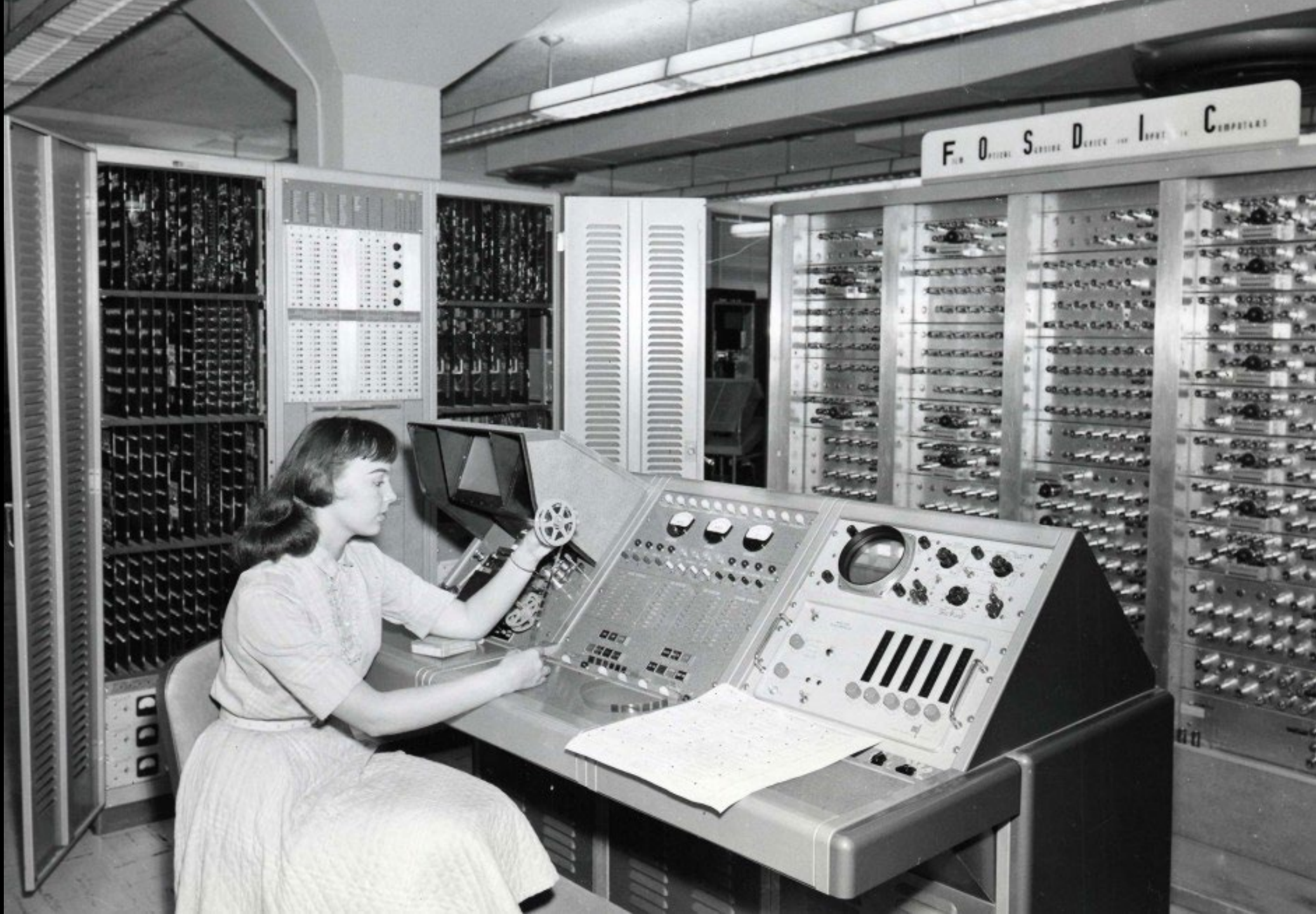
H36. I
are ow
by peo
unit?

H24. Is there a clothes dryer in this unit?	Electric	<input type="radio"/>
	Gas	<input type="radio"/>
	No clothes dryer	<input type="radio"/>

Includ
kept a

H25. Is there television	<input type="radio"/>
--------------------------	-----------------------

H37





05.16.2007







IPUMS

2012: 1940 Census Project

132 Million Persons

71 Fields

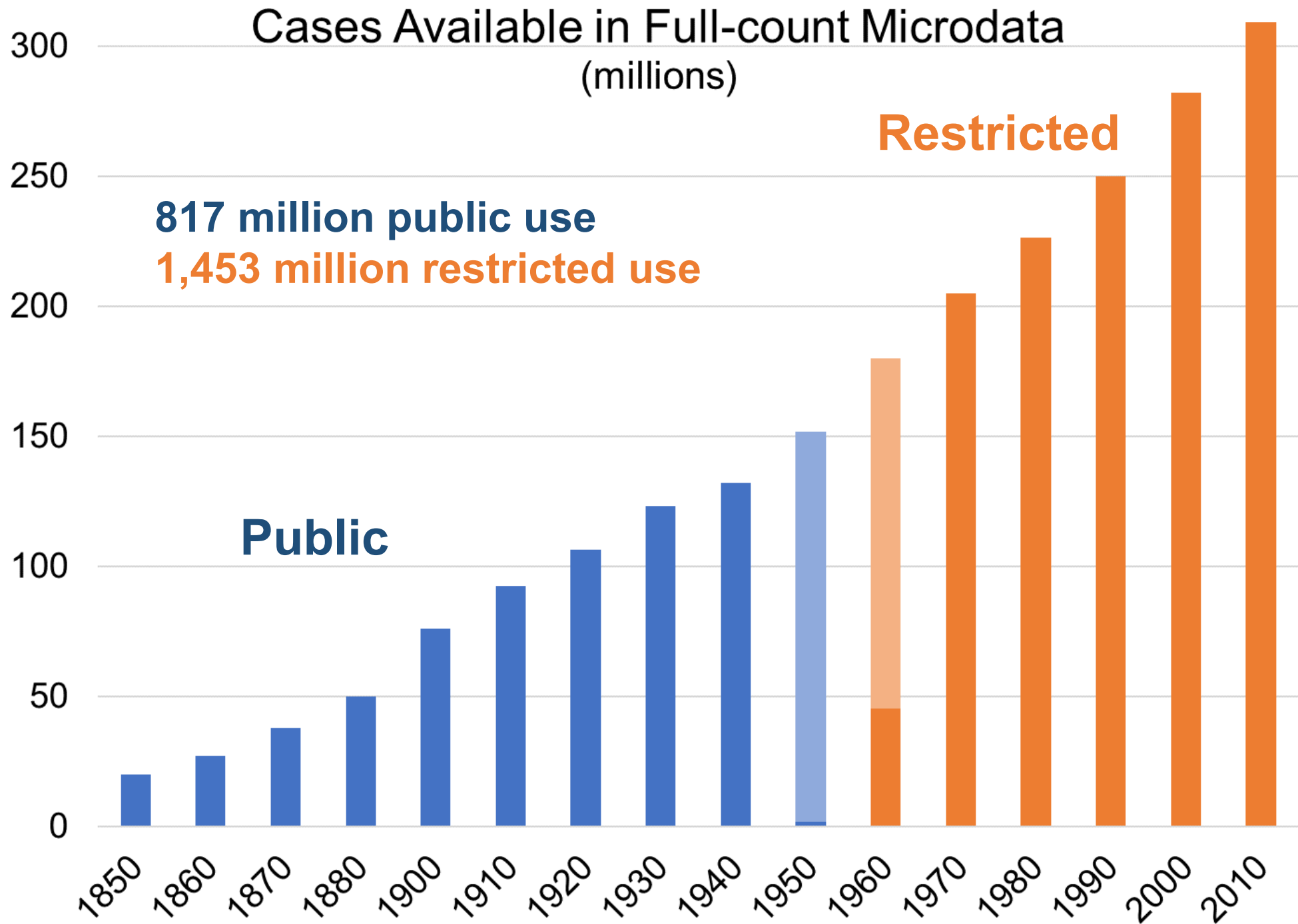
8.6 billion keystrokes

Funding from NIA, NICHD, NSF



2015: Big Microdata Expansion Project

- 1790-1840 Household data
- 1860-1870 Ancestry genealogical data
- 1900-1930 Ancestry/FamilySearch merged data
- 1860-1930 missing fields keyed



2001



NHGIS

National Historical Geographic Information System

*Minnesota Population Center
University of Minnesota*

NHGIS Home

Search

NHGIS Home | [Proposal](#) | [Downloads](#)

View the [full text](#) of the project proposal submitted in Fall 2000 (222 KB; PDF)

There is a [postdoctoral associate position](#) open for this project.

NHGIS Overview

This project makes the census accessible to researchers within the framework of a comprehensive National Historical Geographic Information System (NHGIS). United States summary census data are the primary source of statistical information about growth and change of the American population. The great bulk of these data exist in machine-readable form, but they are largely inaccessible. Approximately 670 gigabytes of data covering the period 1790 through 2000 exist or are in preparation, but they are scattered across dozens of archives and stored in incompatible formats on CD-ROM, magnetic tape, or paper. Only a small fraction of these data are available on the Internet, and even those offer only primitive documentation and extraction tools. Moreover, census summary data cannot be effectively exploited without clear definitions of each geographic unit, but high-quality electronic boundary files exist only for the 1990 census year.

Technological change presents an unprecedented opportunity to make these data readily available for social science research. Bringing the complete census

2003



[Home](#)

[IHIS Components](#)

[Benefits](#)

[Collaborators](#)

[NHIS](#)

[Staff](#)

[Advisory Board](#)

Welcome

The Integrated Health Interview Series (IHIS) is comprised of National Health Interview Survey (NHIS) data and documentation for the period 1963 to 2003. The IHIS will multiply the value of NHIS data by allowing researchers to make consistent comparisons across four decades of dramatic change in public health, and thus to study the health status of Americans as a dynamic process. It will enable a substantial body of new scientific and policy-relevant research into health behavior and disparities, access to and use of medical care, population aging, progress toward public health goals like Healthy People 2010, and many other topics.

[Home](#)[My ATUS](#)[FAQ](#)[Help](#)

PROJECT

[About ATUS-X](#)
[Time Use Variables](#)
[Demographic Variables](#)
[Linked CPS Supplements](#)

EXTRACT BUILDER

[Build an Extract](#)
[Download/Revise Extracts](#)

ATUS DOCUMENTATION

[About ATUS](#)
[Samples](#)
[User's Guides](#)
[Questionnaires](#)

USER RESOURCES

[FAQ](#)
[Citation and Use](#)
[Bibliography](#)
[Revisions](#)

American Time Use Survey Data Extract Builder

ATUS-X is a project dedicated to making it easy for researchers to use data from the American Time Use Survey (ATUS). The ATUS is an ongoing time diary study that is funded by the U.S. Bureau of Labor Statistics and fielded by the U.S. Census Bureau. The goals of the ATUS-X project are:

- To collect and preserve ATUS data and documentation
- To harmonize the data from different years of data collection
- To make it easy to create data files containing the ATUS variables a user needs

Time is our scarcest resource...use it wisely!

New Users

[Create an ATUS-X Account](#)
[Navigating the Site](#)

ATUS-X News

[2012 data](#)
[Release Plans](#)
[Metabolic Equivalent Values for Activities](#)

MPC Data Projects

[IPUMS-CPS and others](#)

Funding provided by:



Supported by:



Maryland Population
Research Center



IDHS

Integrated Demographic and Health Series

2011

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Documentation

- [Surveys](#)
- [MEASURE DHS Links](#)
- [Sample Descriptions](#)
- [Source Documents](#)



Sign up to receive updates
about IDHS

Welcome to IDHS

The Demographic and Health Surveys (DHS) are the main source of information on health in the developing world. IDHS is designed to facilitate analysis of DHS data across time and space.

IDHS will:

- Focus initially on Africa and India
- Display variable availability across surveys
- Code data consistently across years and countries
- Provide variable-specific documentation
- Create customized multi-country and multi-year datasets
- Release data beginning in 2014

2017



PERFORMANCE MONITORING AND ACCOUNTABILITY 2020

HOME | SELECT DATA | MY DATA | FAQ | HELP



DATA

[BROWSE AND SELECT DATA](#)[MY DATA EXTRACTS](#)[REGISTER TO USE IPUMS PMA](#)

DOCUMENTATION

[ERRATA AND REVISIONS](#)[SAMPLE DESCRIPTIONS](#)[QUESTIONNAIRES](#)[USER GUIDE](#)

PROJECT

[ABOUT IPUMS PMA](#)[PMA2020 HOMEPAGE](#)

RESEARCH

MONITORING KEY FAMILY-PLANNING INDICATORS

IPUMS-PMA harmonizes the Performance Monitoring and Accountability 2020 (PMA2020) data series. It provides an interactive web dissemination system for PMA2020 data with variable documentation on hundreds of harmonized variables on family planning, water and sanitation, and menstrual hygiene management. PMA2020 is fielded by the Bill & Melinda Gates Foundation and Johns Hopkins University using streamlined and high-frequency data collection in 11 FP2020 pledging countries.

11 COUNTRIES · 96 SAMPLES · OVER 1800 VARIABLES · OVER 900 THOUSAND RECORDS

[CREATE AN EXTRACT](#)[Get Data](#)[CREATE AN ACCOUNT](#)[Register](#)

The logo for IPUMS IHGIS, featuring the text "IPUMS" in large white letters and "IHGIS" in large green letters, with a stylized globe icon to the left.[illegible]

USER GUIDE

Get Data



U.S. Census and American Community Survey microdata from 1850 to the present. [Learn More](#)



[VISIT SITE](#)

Current Population Survey microdata including basic monthly surveys and supplements from 1962 to the present. [Learn More](#)

[VISIT SITE](#)

World's largest collection of census microdata covering over 100 countries, contemporary and historical. [Learn More](#)

[VISIT SITE](#)

Health survey data for Africa and Asia, including harmonized data collections for [DHS](#)  and [PMA](#) . [Learn More](#)

[VISIT SITE](#)

Tabular U.S. Census data and GIS boundary files from 1790 to the present. [Learn More](#)

[VISIT SITE](#)

Tabular and GIS data from population, housing, and agricultural censuses around the world. [Learn More](#)

[VISIT SITE](#)

Historical and contemporary time



Historical and contemporary U.S.



Survey data on the science and

IPUMS TURNS 30

Help us celebrate 30 years by sharing your IPUMS story

[SHARE STORY](#)

2022 IPUMS RESEARCH AWARDS

The winners of the 2022 IPUMS Research Awards have now been announced

[LEARN MORE](#)

CALENDAR

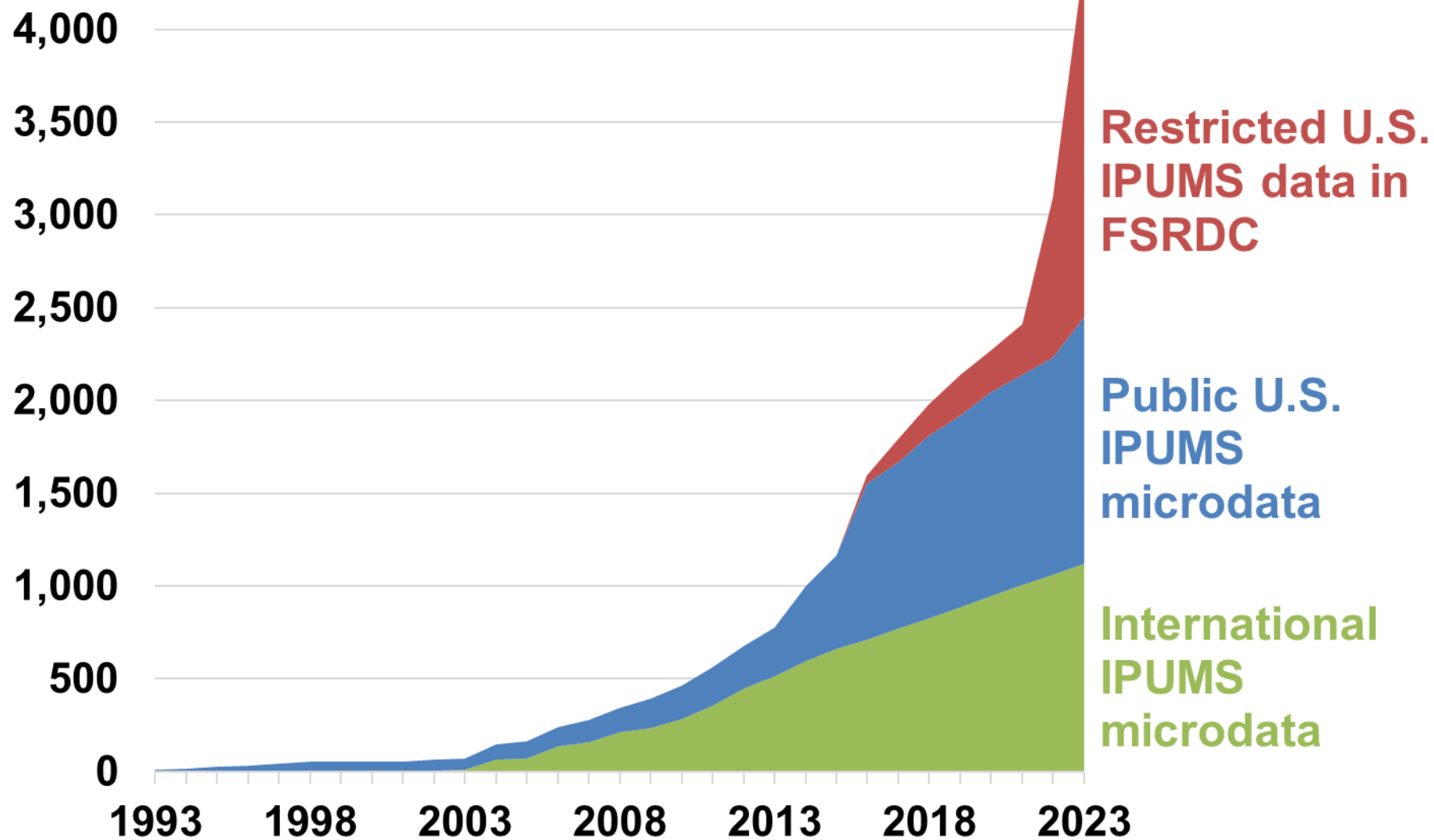
[Association Of Public Data Users Conference](#)

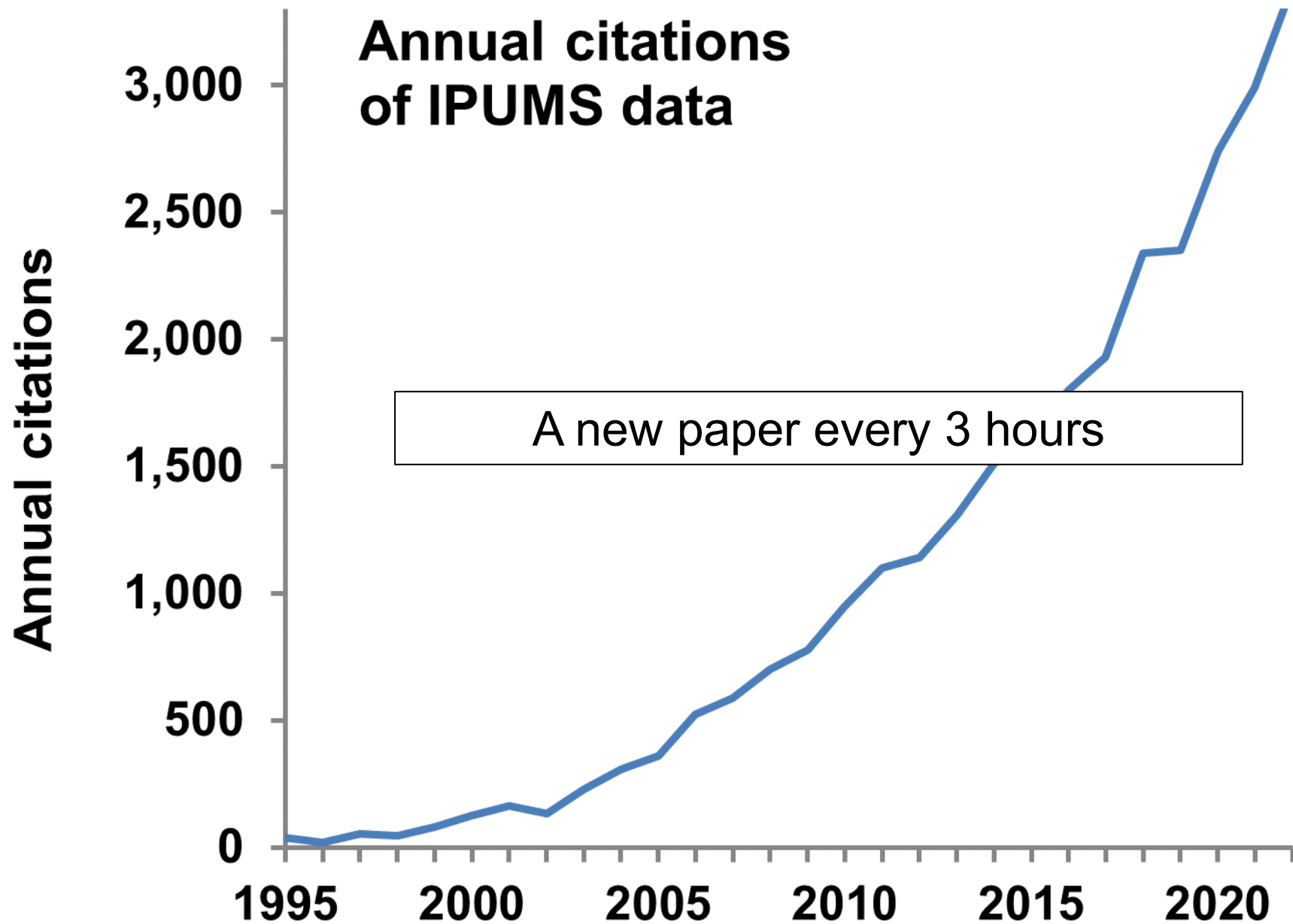
Jul 25, 2023 to Jul 26, 2023
Arlington, VA

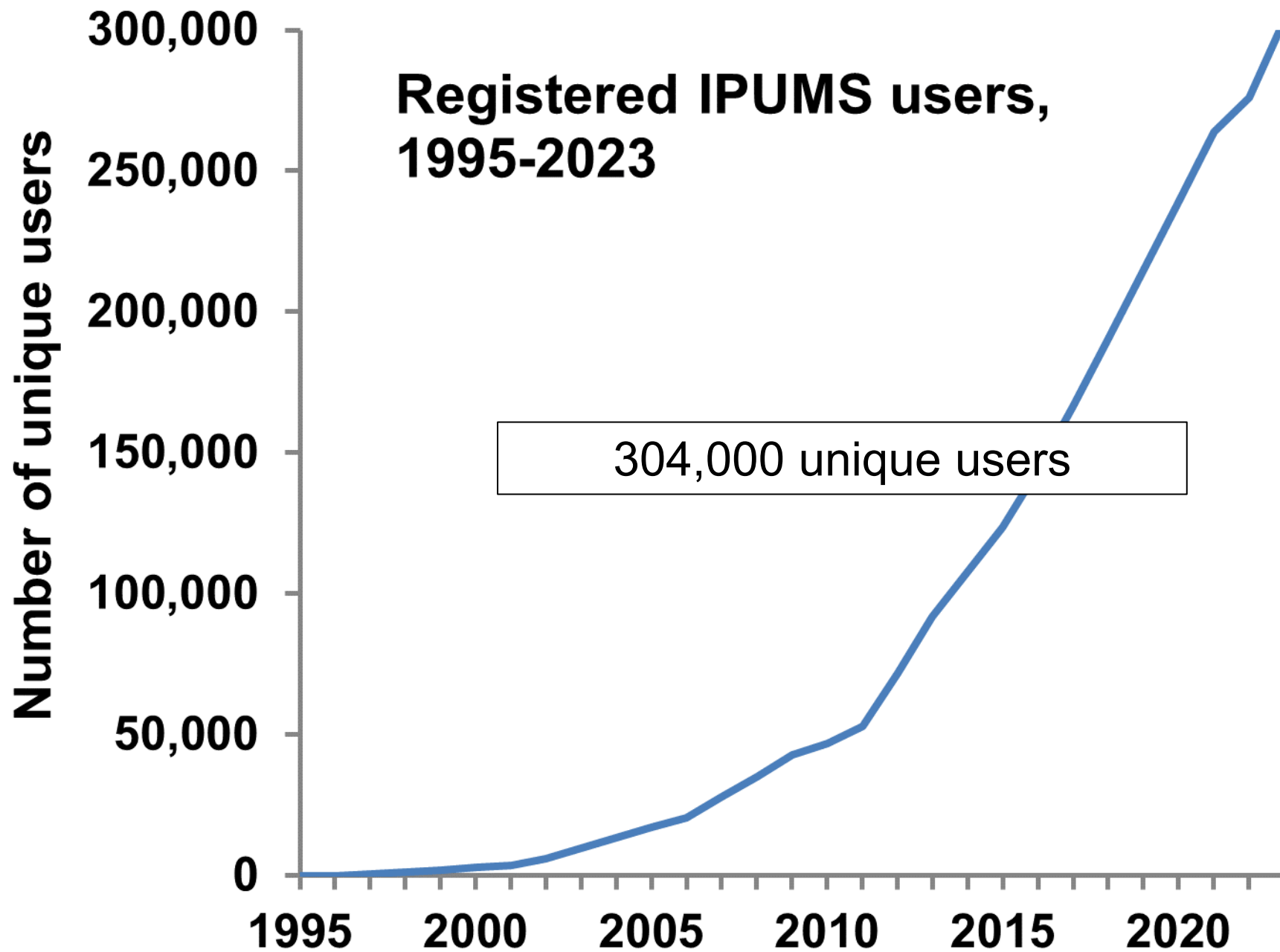
[2023 Data-Intensive Research](#)

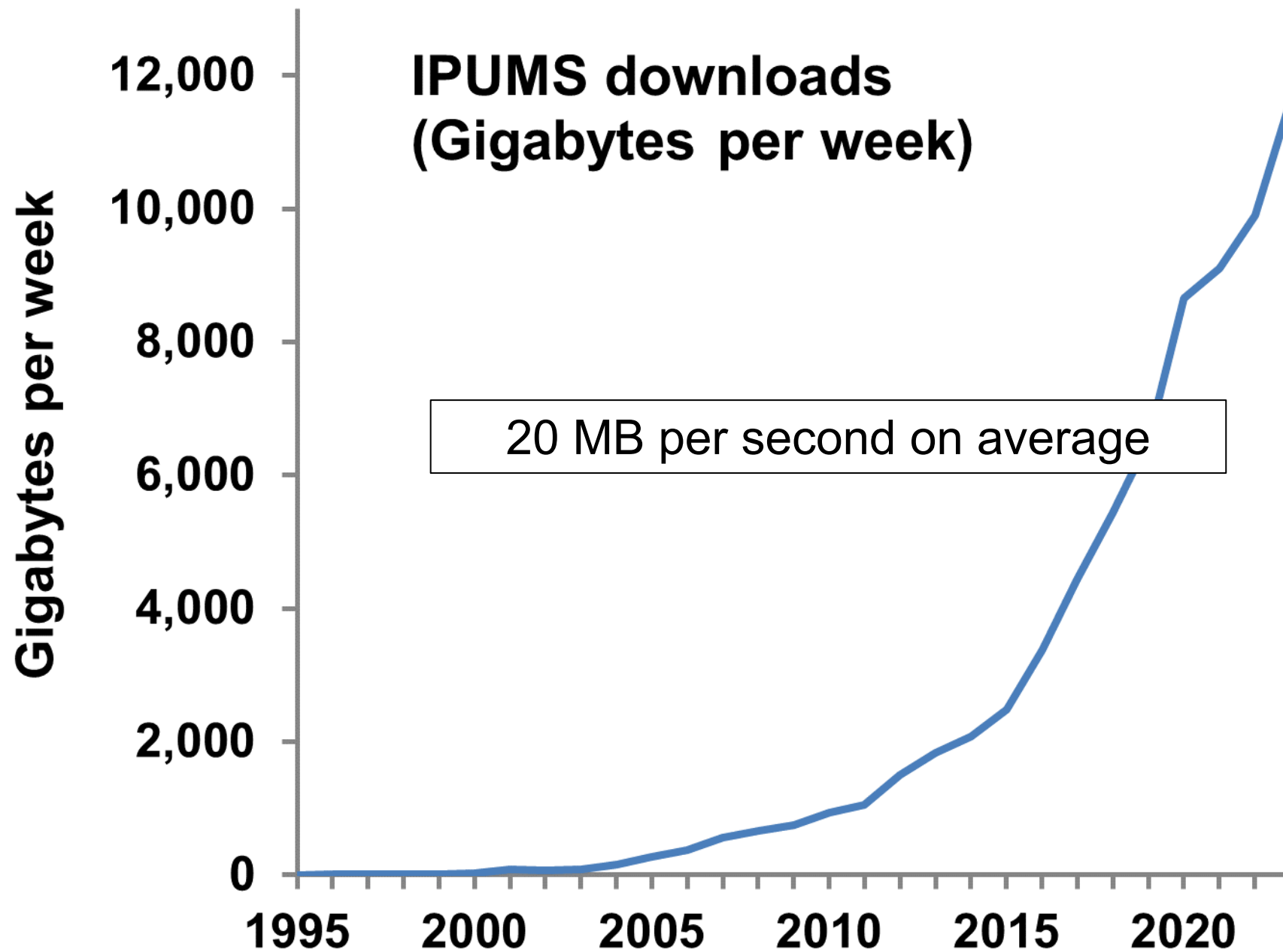
Available IPUMS Microdata 1993-2023

(Millions of Person Records)



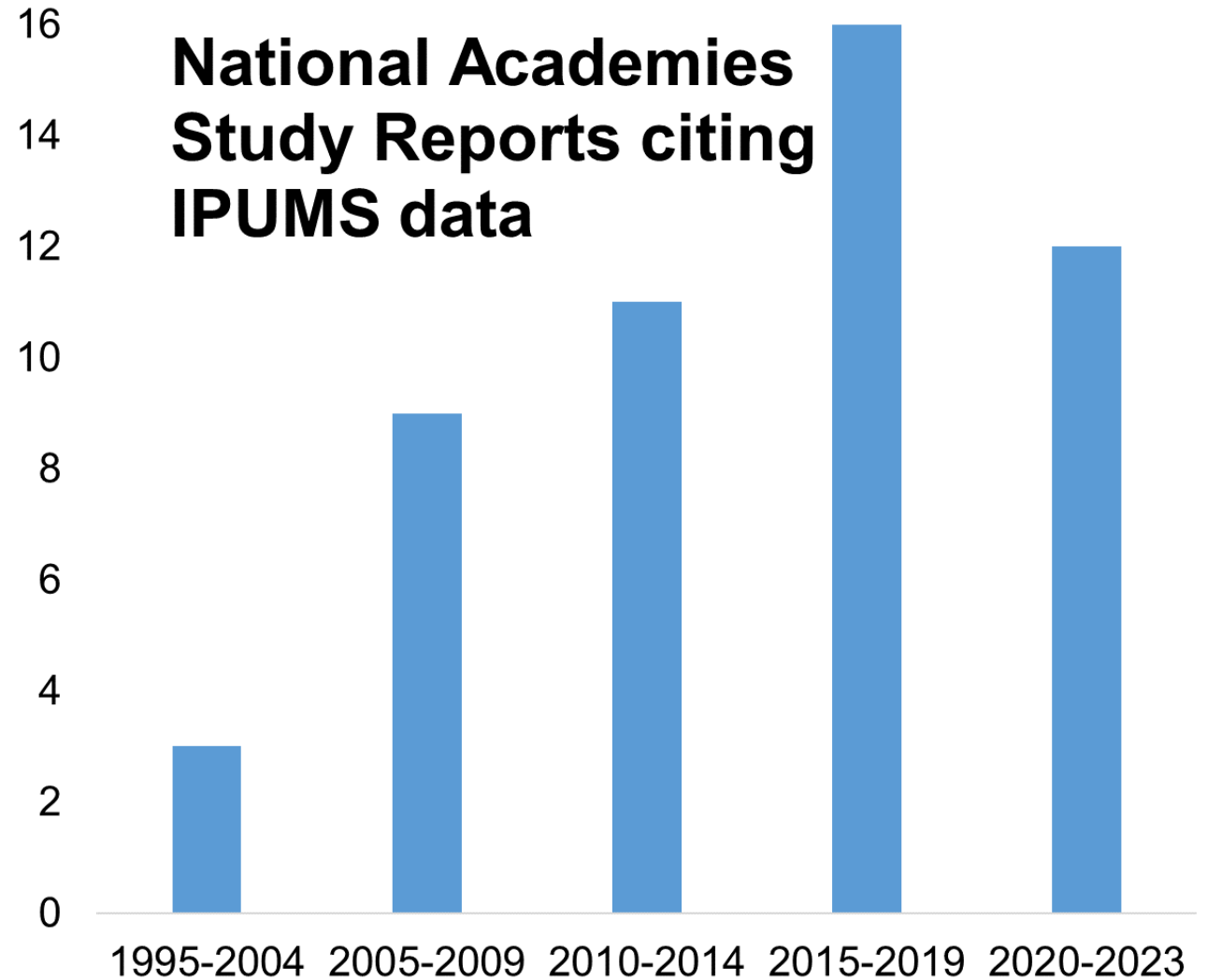






Policy Applications

- International and U.S. agencies and policy organizations rely on IPUMS for core measures of demographic change
- 54 National Academies Consensus Study Reports use IPUMS, including 12 in the past 2.5 years



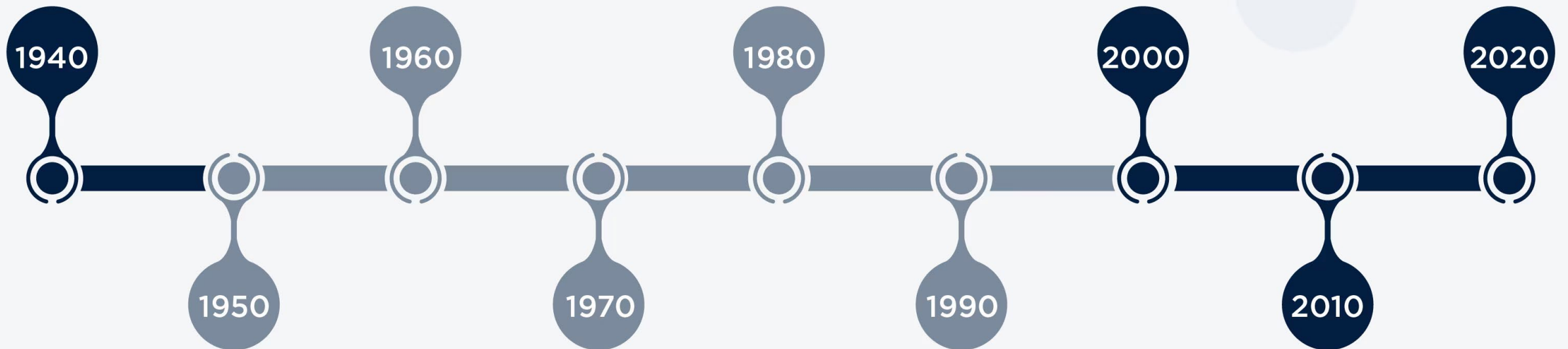


Census Longitudinal Infrastructure Project

- Restricted data project, housed within the Federal Statistical Research Data Centers
- Link 1940 census to Social Security records, assigning an identity key to each person
- 1940 can then be linked to a wide range of later data that are already identified

Linked Decennial Census Data

■ Linked data ■ Unlinked data



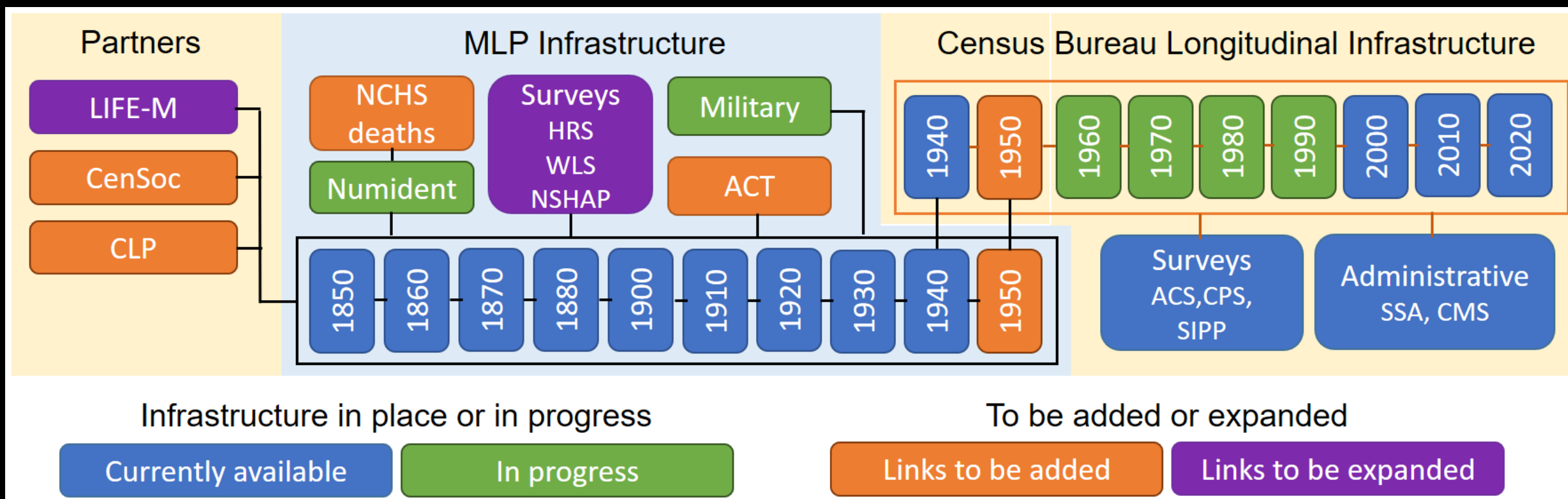




Multigenerational Longitudinal Panel (MLP)

- Link censuses from 1850-1940 to each other and to administrative records
- First release 8/2020, new versions planned annually

Multigenerational Longitudinal Panel (MLP)



Why Big Microdata?

- You can't link samples
- Broad geographic coverage mitigates the problem of out-migration, which is a big problem in some local studies
- Can study small subgroups (e.g. twins, indigenous, residents of public housing in NYC)
- Can link full-count data to small datasets, such as labor union data or recent surveys of aging
- Full-count data allows contextual analysis to understand environmental impacts and community effects (e.g., Ferrie's lead exposure)

The Future

- Build a general framework for linking all available records (e.g., vital records, health surveys, population registers, censuses, administrative records, business records)
- Develop compatible contextual data from government statistics, remote sensing, and other sources and make them easily interoperable with microdata

Lessons from IPUMS

- To make diverse datasets interoperable we need data integration metadata
- To make data derived from a broad range of sources widely used, we need powerful data access tools that make it easy to merge data across time and space
- When feasible, we should connect historical data with recent data to maximize salience and fundability



Thank You.