U.S. Census Bureau

Data Access and Dissemination System (DADS) II Business Requirements Document (BRD)

~~December 7, 2006~~January 8, 2007

Table of Contents

List of Tables

1. INTRODUCTION

The United States Bureau of the Census is a bureau of the U.S. Department of Commerce (DOC) and is one of several principal federal agencies that provide statistical services. The Census Bureau is charged with providing ongoing measures of the U.S. population and its economy. The Census Bureau, which supports the economic and political foundations of the United States, provides a critical service to the nation. Therefore, reliable collection, preparation, tabulation and dissemination of demographic and economic statistics are vital to the Census Bureau's overall mission and strategic goals and objectives.

The Data Access and Dissemination System (DADS) Program is the primary provider of dissemination services via the Internet for the Census Bureau and a significant provider of tabulation services.

The DADS Program is responsible for the dissemination of official demographic and economic information for the Census Bureau via the Internet. In fulfilling its mission, the DADS Program provides both tabulation and dissemination services to the Census Bureau. Tabulation services refer to the activities related to aggregating data collected on individual responses to a survey or census into summarized statistical data suitable for public release. Dissemination services refer to the activities related to the internal staging and release of approved statistics to the Internet. These services include the provision of interim results or output for other areas of the Census Bureau to process and release in different media and formats, such as CD-ROM and DVD, File Transfer Protocol (FTP), or Adobe Acrobat (PDF) for printed publications. The DADS Program currently provides tabulation and dissemination services for the Decennial Census; DADS provides only dissemination services for the Economic Censuses and Surveys, annual Economic Surveys, the annual release of the American Community Survey (ACS), the annual release of the Puerto Rico Community Survey (PRCS), the annual release of the Population Estimates, and the annual release of the Small Area Income and Poverty Estimates.

The DADS Program developed and maintains a suite of inter-related systems including the American FactFinder (AFF) system for dissemination of data and products, the Data Product Production (DPP) system for Census 2000 product tabulations, and the Advanced Query (AQ) system for Census 2000 ad hoc queries against respondent level data (microdata).

The DADS Program has identified program level requirements for a replacement system to continue to offer tabulation and dissemination services to its customers. The replacement system must also meet overall program goals and objectives to improve operational efficiencies, control costs, and increase user satisfaction.

1.1 Purpose

The purpose of the Business Requirements Document (BRD) is to document the high-level DADS program requirements for tabulation and dissemination. The requirements are uniquely identified and organized in several artifacts, as presented in Appendices A through I.

The artifacts include an Action/Object Matrix) for tabulation and dissemination requirements (Appendices A and D respectively). Both matrices were developed from a detailed analysis of current and planned DADS program requirements. The matrices describe the set of required actions to be performed on the required data objects. The tabulation and dissemination requirements, as derived from the matrices, are stated in narrative form in the Requirement Statement Lists (Appendices B and E). In addition, the descriptions for the tabulation and dissemination objects are presented in the Object Definitions (Appendices C and F). Additional tabulation and dissemination requirements are provided in the Non-Functional Requirements (Appendix G).

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The BBRD links to the DADS program goals and objectives to establish backward traceability and forms the basis upon which the Contractor will establish detailed system level requirements. The Contractor documents all of the detailed requirements in an Requirements Traceability Matrix (RTM) (see Section C.4.3, DADS Requirements Management).

1.2   Scope

The Government considers the BRD a temporal document whose purpose is to present the program (or customer) requirements (and not the complete system requirements) against which Offerors will confirm their proposal supports the DADS stakeholder needs and provides the operational capabilities. The Government intends to leverage the mature requirement management and development process of our Contractor partner and evolve the program requirements to the appropriate level of granularity after contract award.

1.3   Goals and Objectives

The goals and objectives for the DADS Program are shown in Table 1-1. Each of the requirements presented in this document will be mapped to the goals and objectives.

Table 1-1. DADS Goals and Objectives

Goals	Objectives
1. Maximize the efficiency, timeliness and accuracy of the tabulation and dissemination processes	1. Meet all legal deadlines and external commitments 2. Contribute to the overall improvement of the quality and accuracy of the data and data products 3. Reduce the elapsed time required to produce releasable data and products 4. Simplify and standardize the processes for tabulation and dissemination 5. Maintain or improve business continuity of tabulation and dissemination operations in a changing environment
2. Minimize the cost of tabulation and dissemination	1. Implement process improvement initiatives to drive down the cost of tabulation and dissemination 2. Collaborate with other Census Bureau organizations that perform tabulation and dissemination in order to reduce cost 3. Leverage existing investments, processes and systems within the Census Bureau
3. Enhance end-user satisfaction with tabulation and dissemination products and services	1. Ensure management and control of data privacy and confidentiality 2. Maintain high system availability 3. Increase user satisfaction with their ability to find and acquire Census Bureau data and data products 4. Increase user satisfaction with the usefulness and relevance of Census Bureau data and data products 5. Develop new, more useful data products and services using existing Census Bureau data 6. Strengthen the effectiveness of secondary distributors of Census Bureau data and data products

U S C E N S U S B U R E A U

2. PROGRAM DESCRIPTION

The Census Bureau is an agency of the U.S. Department of Commerce (DOC) and is one of several principal federal agencies that provide statistical services. The Census Bureau is charged with providing ongoing measures of the U.S. population and its economy. The Census Bureau, which supports the economic and political foundations of the United States, provides a critical service to the nation. Therefore, reliable collection, preparation, tabulation and dissemination of demographic and economic statistics are vital to the Census Bureau's overall mission and strategic goals and objectives.

Relevant, accurate and timely statistics support decision making at every level of government. These statistics allow for the administration and equitable funding of many federal, state, and local programs and are used to fulfill Constitutional and legislative mandates. One example is Article 2, Section 1 of the Constitution that requires an enumeration of the population every 10 years to apportion the seats in the House of Representatives among the states. States use this data to redraw their legislative districts. Legislators, policy makers, educators, planners, businesses, non-profit organizations, and the general public on a daily basis also use statistics collected and disseminated by the Census Bureau for numerous purposes.

Other important Census Bureau measures are part of the fabric of today's information age. These measures include monthly housing starts, new home sales, the monthly unemployment rate, the balance of trade, the poverty rate, and construction spending.

The management of Census Bureau data tabulation and dissemination processes presents a number of unique challenges:

- Volume and complexity of the data that must be tabulated
- Variety and complexity of the data that must be disseminated
- Uniqueness of the statistical techniques for aggregate calculations
- Overlay of techniques to protect the confidentiality of respondents
- Complexity of preparing intermediate products
- Complexity of geographic hierarchies
- Diversity of data users and their information needs

The Census Bureau requires accuracy in the tabulation and dissemination results. The Census Bureau also requires the security of its systems, the protection of the confidentiality of survey and census respondents, and user satisfaction with the data products and systems.

2.1 Census or Survey Business Process Flow

Figures 2-1 highlights the generalized process used by the Census Bureau to plan, collect, edit, tabulate and disseminate the results of a survey or census. The details of each step in the process vary depending on the particular census or survey being implemented.

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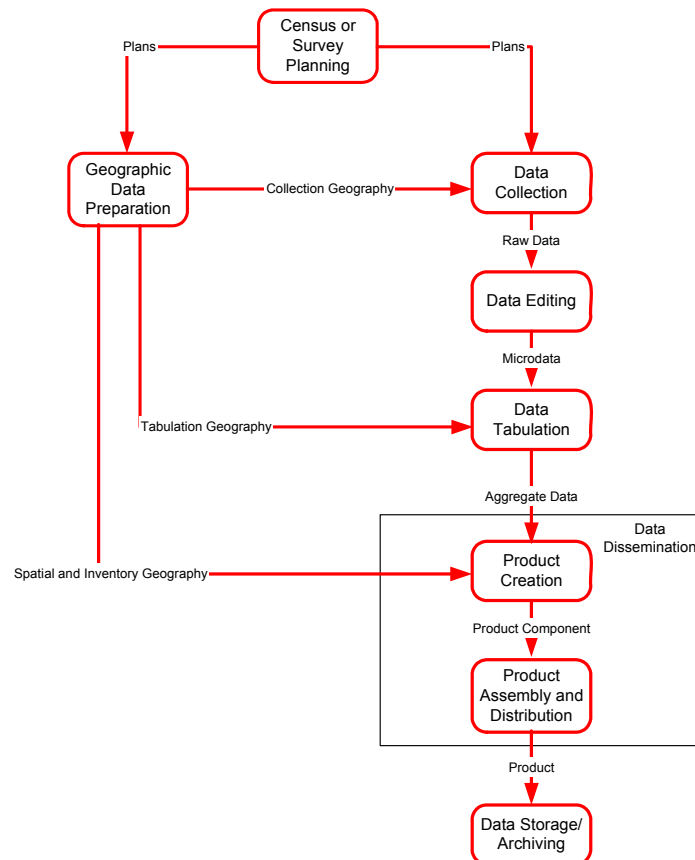
Figure 2-1. Census or Survey Business Process Flow

The DADS Program is responsible for tabulation and dissemination activities for the censuses and surveys identified in Section 2.2, Directorate Program Areas. Specific requirements for each census or survey will vary according to the design and overall dissemination goals for a particular program or directorate.

2.1.1   Census or Survey Planning
Census or survey planning activities cover the entire process of a census or survey. While overall census and survey planning activities are not initiated by the DADS program, the DADS staff participates in those activities. The planning activities range from questionnaire design, sample design, data collection design, data processing and editing, data tabulation and summarization, and final aggregated data product design and dissemination. The planning, collection and processing activities precede tabulation and dissemination, therefore impact the specific requirements for any given product.

2.1.2   Geographic Data Preparation
Geographic data preparation requires maintaining current governmental unit boundaries for the numerous geographic areas for which the Census Bureau collects and publishes data. Separate statistical geographic areas are also defined in collaboration with state and local governments. Geographic data support the collection, editing, tabulation, and dissemination activities. Dissemination inputs include the spatial data files and geographic inventory data files.

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The DADS Program does not perform geographic data preparation.

2.1.3   Data Collection
Data collection is the process by which answers to questions for a particular survey or census are collected from individual households, persons, or businesses. Various methodologies are utilized such as mailing questionnaires, telephone follow-up, and personal visits. The responses are recorded as respondent level data in a machine-readable format for further processing.

The DADS Program does not perform data collection.

2.1.4   Data Editing
Data editing converts the respondent level data from the data collection process into a "clean", confidential, microdata input file ready for data tabulation. Specific activities during this phase include data imputation, consistency checking, and weighting.

The DADS Program does not perform data editing.

2.1.5   Data Tabulation
Data tabulation is the process by which respondent level data from confidential microdata files, delivered from the data editing process, are aggregated and/or manipulated into data results suitable for public release. The confidential microdata files containing data about individual persons, households, or businesses are protected by Title 13 of the U.S. Code, and are not made available to the public. Tabulation inputs also include product specifications and geographic files.

The DADS Program and other areas of the Census Bureau perform data tabulation. Details of individual products for which the DADS Program is responsible can be found in Appendix H.

More specifically, DADS tabulation operations consist of batch tabulation processes, ad hoc tabulation processes, and Public Use Microdata Sample (PUMS) file creation. Batch tabulation is a non-interactive process to create large-scale, comprehensive data products intended for broad public use. Ad hoc tabulation is an interactive process to create on-demand tabulations for authorized users. An individual ad hoc query typically produces a simple table result. A PUMS file is a publicly available extract from a full, confidential microdata file taken in a manner that avoids disclosure of information about households or individuals while allowing data users to prepare tabulations using their own tools or systems.

2.1.6   Data Dissemination
Data dissemination consists of acquiring the tabulated data, metadata, product specifications, and geographic input files necessary to fully stage a product. The dissemination process also provides the system functions necessary to select, search, print, display, manipulate, and download the various components of approved product formats of Census Bureau published data.

The DADS Program requires that data products be available for data provider review prior to public release. This allows each data provider the opportunity to review the data content for accuracy and completeness prior to public release. The process and timing of the public releases vary according to the requirements for each program area. Upon approval, the data are released to the Internet or to other areas of the Census Bureau for processing onto various media formats.
Data dissemination is performed by the DADS Program and other areas of the Census Bureau. Details of individual products and files for which the DADS Program is responsible and their specific release dates can be found in Appendix I.

U S C E N S U S B U R E A U

2.1.6.1 Product Creation

During product creation, inputs are loaded, verified and transformed to build product components, which are then reviewed for completeness and accuracy.. Depending on the review outcome, inputs or processes may need to be modified and creation steps repeated

2.1.6.2 Product Assembly and Distribution

During product assembly and distribution, data components for a specific release are identified, staged, and deployed by the DADS Program via the Internet. The Administration and Customer Services Division (ACSD) assembles many of the same or similar data components on CD-ROM and DVD, and then distributes the final data product

2.1.7 Data Storage/Archiving

Data storage/archiving involves the long term storage of Census Bureau records, documents and products that have enduring value and have therefore been designated as "permanent". Storage of permanent items must meet the requirements of the National Archives and Records Administration to ensure future accessibility regardless of computer hardware or software platforms.

The DADS Program does not perform data storage/archiving, but may be called upon to coordinate with other Census Bureau areas when an item originally produced by DADS is designated as "permanent".

2.2 Data Transformation

Figure 2-2, the Conceptual Data Hierarchy, illustrates the relationship between the data tabulation activities and the data dissemination activities. The three-level hierarchy shows the transformation of respondent level microdata files in Tier 3 into aggregated data in Tier 2. Products created in the first level of aggregated data products in Tier 2 are the base/detailed tables, and data files. These products provide the most detailed aggregations of data made available to the public. During the dissemination process, additional derived products are created from the base/detailed tables.

Derived products consist of further summarized data presented in a table or map format. The derived products from Tier 2 are released with their source base/detailed tables as discrete data files. The base/detailed tables and the derived products may be replicated in Tier 1 during the Product Assembly and Distribution process as static, fixed format products on a variety of media.
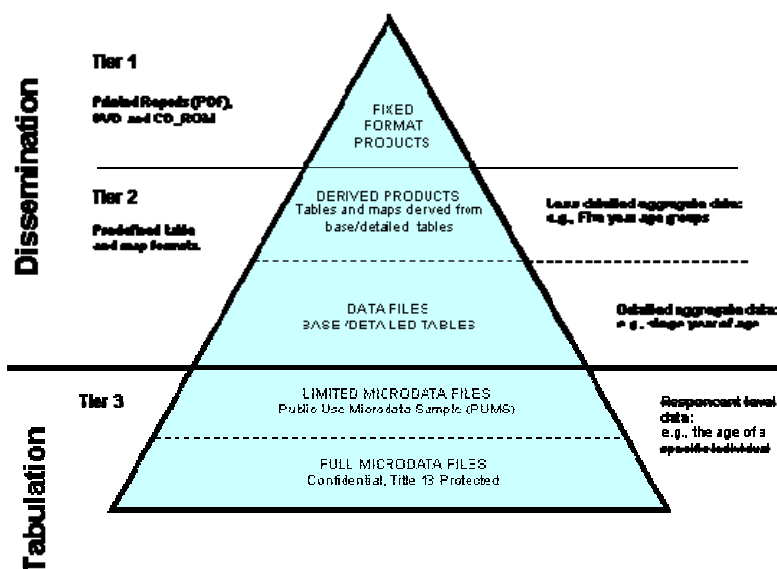
U S C E N S U S B U R E A U

Figure 2-2. Conceptual Data Hierarchy

2.3   Directorate Program Areas
Currently, the DADS Program provides tabulation and/or dissemination services to four directorates within the Census Bureau: Decennial, Demographic, Economic and Communications. Additional areas of the Census Bureau may require tabulation and/or dissemination services of the DADS program over the life of the DADS II Contract. The program areas within each directorate have the subject matter expertise required for the design, collection, processing, tabulation, and dissemination of censuses, surveys, projections, and estimates.

The following sections list the programs supported and services provided by the DADS Program. The sections include prior products released under the DADS Program and future work covered under the DADS II contract.

2.3.1   Decennial Directorate
The Decennial Directorate (see Table 2-1) is responsible for the Decennial Census of Population and Housing for the United States, Puerto Rico, and the Island Areas. The Decennial Census fulfills Constitutional, legislative and programmatic mandates. The Decennial Directorate is also responsible for the American Community Survey (ACS) program, conducted in the United States and Puerto Rico.

Table 2-1. Decennial Directorate

Program	Periodicity	Years Supported	Tabulation Services	Dissemination Services
Decennial Census	Every 10 years	1990 – United States	No	Yes (part)
		2000 – United States and Puerto Rico	Yes	Yes
		2000 – Island Areas	No	Yes
		2000 – Puerto Rico (Spanish)	NA	Yes

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Program	Periodicity	Years Supported	Tabulation Services	Dissemination Services
		2010 - United States, and Puerto Rico	Yes (includes support for CD-ROM/DVD)	Yes (includes support for printed publications)
		2010 – Puerto Rico (Spanish)	NA	Yes
		2010 – Island Areas	Yes	Yes
American Community Survey	Annual	2000 – 2004 United States	No	Yes
		2005 – 2016 United States and Puerto Rico	No	Yes
		2005 – 2016 Puerto Rico (Spanish)	NA	Yes
		2005-2016 Special Tabulations	No	case by case

2.3.2   Demographic Directorate

The Demographic Directorate (see Table 2-2) is responsible for numerous demographic surveys to profile and measure the people, housing, and institutions of the Nation. They also compile and release the annual population and housing estimates and population projections.

Table 2-2. Demographic Directorate

Program	Periodicity	Years Supported	Tabulation Services	Dissemination Services
Population Estimates	Annual	2001-2016 – United States and Puerto Rico	No	Yes (part)
Decennial Census Special Tabulations	Every 10 years	2000 School Districts	Yes	No
		2010 School Districts	Yes	TBD
	Throughout the decade	2010 – other special tabulations	case by case	case by case
Small Area Income and Poverty Estimates	Annual	2004 – 2016 – United States and Puerto Rico	No	Yes (part)

2.3.3   Economic Directorate

The Economic Directorate (see Table 2-3) is responsible for the quinquennial economic census for the United States, Puerto Rico, and the Island Areas, as well as numerous annual, quarterly and monthly surveys. The census and surveys are designed to measure the Nation's economy and provide information on federal, state, and local governments.

Table 2-3. Economic Directorate

Program	Periodicity	Years Supported	Tabulation Services	Dissemination Services
Economic Census	Every 5 years	1997 – United States	No	Yes (part)
		2002 – United States	No	Yes
		2002 – Puerto Rico and Island Areas	No	Yes

USCENSUSBUREAU

Program	Periodicity	Years Supported	Tabulation Services	Dissemination Services
		2007 – United States	No	Yes
		2007 – Puerto Rico and Island Areas	No	Yes
		2012 – United States	No	Yes
		2012 – Puerto Rico and Island Areas	No	Yes
Commodity Flow Survey	Every 5 Years	2007 – United States	No	Yes
		2012 – United States	No	Yes
Survey of Business Owners	Every 5 years	2007 - United States	No	Yes
		2012 – United States	No	Yes
Business Expense Survey	Every 5 years	2007 – United States	No	Yes
		2012 – United States	No	Yes
Nonemployer Statistics	Annual	2002 – 2016: United States	No	Yes
Annual Survey of Manufactures	Annual	2003 – 2016: United States	No	Yes
Business Patterns	Annual	2004 - 2016: United States	No	Yes

2.3.4   Communications Directorate

The Communications Directorate is responsible for official news releases, press releases and other notifications of product and data releases and responding to and providing services for the media. The directorate also serves as the official liaison to the Congress and in that capacity sponsors a dedicated web site, FastFacts for Congress, to disseminate data and products from the Census Bureau. This site is built and maintained by the DADS Program and can be found at http://fastfacts.census.gov.

2.4   Legacy Systems

Table 2-4, DADS Legacy Systems, lists the inter-related systems that currently provide the automated capabilities required to support data tabulation and dissemination business operations. The DADS Program recognizes that its tabulation and dissemination systems are approaching obsolescence, and therefore has initiated the DADS II solicitation seeking a replacement system. Additionally, the DADS II contract requires the contractor to operate and maintain the DAD legacy systems until they are retired by the replacement system. See Section J-11*, DADS Legacy Systems* for more detailed information on the technical design and operation of these systems.

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Table 2-4. DADS Legacy Systems

System	Description	Tabulation	Dissemination

American FactFinder (AFF)	• Online system that enables access to pre-packaged data products and user-selected data tables and maps
	• Web-based application with Oracle data warehouse, Java code, and Websphere Application Server
	• The system includes:
	❖ American FactFinder:
	   http://factfinder.census.gov/home/saff/main.html?_lang=en
	❖ FastFacts for Congress:
	   http://fastfacts.census.gov/home/cws/main.html
	❖ American Indian and Alaskan Native Data and Links site:
	   http://factfinder.census.gov/home/aian/index.html
		No	Yes

Advanced Query (AQ)	• Online system that enables ad hoc queries on microdata, subject to Census policies on access and confidentiality • Web-based application comprised of an Oracle database and an application based on the commercial, off-the-shelf (COTS) product, MicroStrategy • User name and password protected	Yes	Yes
Data Product Production (DPP) System	• Primary Decennial Census batch tabulation system • Tabulate Decennial data (100% and Sample data) • Large-scale system comprised of SuperSTAR software and database with custom code using SAS and UNIX shell scripts	Yes	No
Virtual Table Generator (VTG)	• Translates product specifications into AFF compatible metadata	No	Yes
Fenestra Printed Report Generator	• Tool by which data outputs were created as inputs to PDF printed reports	No	Yes (inactive)

3. PRODUCT DELIVERABLES

The DADS Program deliverables are divided into tabulation and dissemination deliverables. They are further grouped by census or survey. Refer to Appendices H and I respectively for a list of tabulation and dissemination deliverables. These deliverables reflect the current understanding of the DADS Program requirements.

3.1 Generic Product Types

Each Directorate specifies a particular mix of product types and formats for the dissemination of the results of a given census or survey. These program areas follow well-established practices and procedures for the design, specification, and presentation of the results. Results are presented in some combination of generic product types, including data files, tables, maps, analytical reports, metadata, and documentation, as described in Table 3-1, Generic Product Types.

Table 3-1. Generic Product Types

Type	Description
Data Elements	• Individual, data characteristics such as total population, income, age, sales, number of employees, housing starts, etc. • Usually presented in table, map or chart format for viewing, or collected into data files for computer manipulation.
Documentation	• Provides information to clarify data definitions and use

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	• Includes information on data collection instruments, data processing procedures, and data accuracy • Includes meaning of terms and concepts, and interpretation of coding schemes • May appear in both print and electronic media
Metadata	• Structured and stored as data • Provides information about underlying data elements

Tables	• Collections of data systematically arranged in tabular form with appropriate titles, headers, footnotes and labels
	• Generally designed for viewing
	• Content, structure, and format defined by subject matter experts
	• Two levels of aggregation:
	   o Base/detailed tables are the most granular and are assembled to create data files
	   o Derived tables are constructed from base/detailed tables to further aggregate or modify data presentations. Examples include:
	      ▪ Data Profiles/Comparison Profiles
	      ▪ Quick Tables/Subject Tables
	      ▪ Geographic Comparison Tables

Maps	• Reference maps graphically describe geographic bounds used for tabulation • Thematic maps (e.g., multi-colored choropleth maps) help users visualize geographic patterns in data • Both map types include orienting features (e.g., roads, water bodies, and geographic boundaries)
Charts	• A visual representation of data using shape, size, color or arrangement to illustrate data patterns and distributions.
Reports	• Publication-quality assemblages of tables, maps and charts on a particular topic, often accompanied by narrative or analytical descriptions. • May be available in both print and electronic form. • Examples include Census 2000 Printed Report series.
Data Files	• Collections of data elements designed for computer manipulation • May consist of public use microdata samples or aggregated data • In aggregated data files, related data elements may be logically grouped into matrices. (For viewing, matrices are presented as base/detailed tables.) • Accompanied by extensive documentation or metadata • Examples include, Census 2000 Summary File and Economy-Wide Key Statistics (EWKS) files

3.2 High Level Analysis Factors

Table 3.2-1, High Level Analysis Factors, identifies and defines those key factors used to determine schedules, estimate workloads and identify potential application updates required to support the tabulation and dissemination of a particular suite of products.

Table 3.2-1 High Level Analysis Factors

Analysis Factor	Definition
Periodicity	Frequency of survey or census data collection and publication.

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Analysis Factor	Definition
Product Dimensions	Geography – several detailed concepts are considered: ▪ Geographic Coverage: The land over which a survey/census is conducted. ▪ Geographic Type: A defined geographic area for which data are tabulated and reported (e.g. States, counties, county subdivisions, census tracts). Geographic types are organized into hierarchies to show their inter-relationships. ▪ Geographic Summary Levels: A geographic type by which data are reported. Summary levels usually trace a nesting hierarchy (e.g. State – county – census tract) or may cross between two or more hierarchies (e.g. State – place – county). The number and types of summary levels provided in a suite of data products can vary between or within product types. ▪ Geographic Vintage: The time reference for a particular geographic boundary or set of boundaries; these are usually the same as the year of the data but not always.
	Demographic Characteristics: Demographic characteristics define the detailed subject matter presented in a suite of demographic products. Generally grouped into characteristics of the population and housing, for the Decennial Program, they are further grouped according to the data collection method: ▪ One hundred Percent - those subject characteristics collected from the entire population and household universe; examples include total population, age, race, and sex. ▪ Sample – those subject characteristics asked of a sample of the population and households; examples include income, educational attainment, ancestry, disability, and mortgage status.
	Characteristic Iterations: Examples of this product dimension can be seen in the Census 2000 Summary Files 2 and 4 where each table of data (characteristics) in the summary file are repeated (iterated) for population groups defined by a racial, ethnic, ancestral or tribal affiliation. Each "iteration" represents a unique population group for which data are tabulated and disseminated.
	Economic Characteristics: Economic characteristics define the detailed subject matter presented in a suite of economic products. Examples of characteristics include the number of establishments (or companies), number of employees, payroll and the measure of output (sales, receipts, revenue, value of shipments, or value of construction work done). Economic data are classified according to both industry and product code classification systems: ▪ The North American Industrial Classification System (NAICS) is a method used to classify industries using 2-, 3-, 4-, 5-, and 6- digit levels of detail. Two-digit codes represent sectors, the broadest classifications. Six-digit codes represent individual industries in the U.S. The system was developed by representatives from the United States, Canada, and Mexico, and replaced each country's separate classification system with one uniform system for classifying industries. With the publication of the 1997 Economic Census in the United States, the NAICS replaced the Standard Industrial Classification, a system that federal, state, and local governments, the business community, and the general public had used since the 1930s. ▪ The Census Bureau also classifies products and product lines. The first 6 digits of the 10-digit product code are normally the same as the NAICS code for the industry with which the product is most frequently associated. Broad product or service lines also are provided for some sectors. In four sectors, service lines are classified according to the new North American Product Classification System (NAPCS).
Release Approach	The method and frequency by which data products are released to the public. A number of different methods are utilized by various data providers: ▪ By theme (i.e. topic) ▪ By publication series ▪ All data at one time

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Analysis Factor	Definition
	▪ By state ▪ By geographic type The frequency of data releases vary by product suites, and currently range from biweekly releases for Economic Census data to semi-annual wave releases for the American Community Survey. Note that the release flow for a particular product suite can change over time.
Number and Type of Products	Subject matter specialists define a suite of products for dissemination for each survey/census. These products are the approved format by which data are aggregated for dissemination to the public. ▪ The number and type of these products is variable across surveys and censuses. ▪ In general, the higher the number and type of products, the more data and metadata deliveries and processing time required. ▪ Generic product types are described in Table 3-1. Detailed descriptions and examples of these products are described in Appendices C and F.
Data presentation anomalies	Data presentation anomalies consist of exceptions, gaps or inconsistencies in the presentation of data. The anomalies vary across products and must be captured as business rules to govern navigation and presentation. Data anomalies occur as a result of: ▪ the application of **disclosure rules** to prevent the publication of confidential data ▪ the application of **data quality** techniques and processes ▪ **variations in subject definitions** between Puerto Rico and the United States
Language	For demographic products for Puerto Rico, presentation of data and navigation to the products is required in both Spanish and English.

Table 3.2-2, Comparison of Analysis Factors for Selected Programs, compares those factors for three different program areas to illustrate the potential variation among products and the business and system requirements. These analysis factors determine the number and content of the product components and data deliveries that must be managed in order to successfully tabulate and disseminate products. A more detailed analysis of each area is undertaken as part of the development and documentation of system requirements.

Table 3.2-2. Comparison of Analysis Factors for Selected Programs

Analysis Factor	Economic Census	American Community Survey	Decennial Census
Periodicity	Every 5 years for years ending in 2 and 7.	Annual	Every 10 years, year ending in zero.

U S C E N S U S B U R E A U

Analysis Factor	Economic Census	American Community Survey	Decennial Census
Product Dimension - Geography Note: For brevity, only Geographic Coverage is noted.	United States and Puerto Rico and the Island Areas of American Samoa, Guam, the U.S. Virgin Islands, and the Commonwealth of Northern Mariana Islands.	United States and Puerto Rico	United States and Puerto Rico and the Island Areas of American Samoa, Guam, the U.S. Virgin Islands, and the Commonwealth of Northern Mariana Islands.
Product Dimension – Demographic Characteristics	Limited (race, sex, and gender)	Applicable	Applicable
Product Dimension - Characteristic Iterations	Limited (major race groups only)	Applicable	Applicable
Product Dimension - Economic Characteristics	Applicable (NAICS)	Not applicable	Not applicable
Release Approach	By publication series: 2002: Biweekly release over 2 year period. Data were released by these series: ▪ Industry ▪ Geographic area ▪ Subject ▪ Summary ▪ Core business statistics ▪ Company statistics ▪ ZIP Code statistics ▪ Miscellaneous Within each series, there were multiple, incremental releases of data within each economic sector.	By theme (i.e. topic): 2005: Four waves by topic: ▪ General demographic characteristics ▪ Social characteristics ▪ Housing characteristics ▪ Race and ethnic group characteristics	By state: 2000: By groups of states, then a National file.

Number and Type of Products	Three types:
	1. Detailed Statistics Files (over 700 for the 2002 Economic Census)
	2. Quick Reports (3 variations)
	   o Product
	   o Geography
	   o Industry
	3. Reference Maps
		Eleven types:
		1. Base/Detailed Tables
		2. Data Profiles
		3. Narrative Profiles
		4. Comparison Profiles
		5. Ranking Tables
		6. Geographic Comparison Tables
		7. Thematic Maps
		8. Subject Tables
		9. Selected Population
		10. Profiles (iterated and non-iterated)
		11. Reference Maps
		12. Summary Files
			Six types:
			1. Base/Detailed Tables
			2. Demographic Profiles
			3. Quick Tables
			4. Geographic Comparison Tables
			5. Thematic Maps
			6. Reference Maps

Data presentation anomalies	Anomalies due to application of disclosure rules.
	
	Data flags are associated with suppressed counts and are shown in the on-line display. Data flags can be included in the download as an option.
		2005 American Community Survey:
		Disclosure
		▪ Presentation of collapsed and non-collapsed base tables. Impacts include:
		   o Additional metadata to build relationship between 2 table types
		   o A link above the table to navigate from one to the other
			Census 2000 Summary File 3 Disclosure
			▪ In one summary file, most Population and Housing detailed tables were available to the Block Group level while other Detailed Tables were only available to the Census Tract level. Impacts include:
			   o Variable table

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Analysis Factor	Economic Census	American Community Survey	Decennial Census
		Variation in subject definition ▪ Some Residency and Geographic Mobility Tables will have a US version and Puerto Rico (PR) version. The US version is not available for PR geographies and the PR version is not available for US geographies. Data Quality, for example: ▪ Non-iterated Age of 1st Marriage tables are limited to nation and state only. ▪ Iterated Age of 1st Marriage Tables are limited to state only.	numbering o Providing explanation to user on reason for suppression. Disclosure ▪ Census 2000 Summary Files 2 and 4 – Each table in these files was iterated for a selected number of race and ethnic groups. Population threshold criteria were applied to each file to determine the geographic areas available for each population group. Variation in subject definition ▪ For the Decennial Census 2000, a number of tables were created to present data for Puerto Rico only; this required business logic to recognize the selection and to retrieve the appropriate tables.
Language	English	English, Spanish for Puerto Rico only	English, Spanish for Puerto Rico only

3.3 Tabulation Data Product Descriptions

The DADS Program is responsible for delivering several products associated with data tabulation. The list of major tabulation product deliverables is presented in Appendix H.

3.3.1 Decennial Directorate

The Decennial Directorate sponsors tabulation of data products from the Decennial Census and the Island Area Censuses.

3.3.1.1 2010 Decennial Census Tabulation Products

Data products for the 2010 Decennial Census and the 2008 Dress Rehearsal are not yet defined but are likely to consist of the typical data files produced for prior censuses. The 2010 Decennial Census data products will be produced from data collected from questions asked of all persons and households referred to as the "hundred percent" data. Hundred percent data characteristics include basic demographic data such as age, race, sex, and relationship. The final decision on the hundred percent data characteristics for the 2010 Decennial Census will be decided by subject matter areas of the Census Bureau.

Below is a brief description of the typical data files produced for the Census 2000 as an example of what DADS will be responsible for in 2010 Decennial Census.

Summary Files 1 and 2 – Hundred Percent

Summary File 1 provides data for a limited number of race groups for all geographic areas in the United States down to the block level. Summary File 2 iterates the same data characteristics for detailed

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population groups such as Japanese, Dominican, and Cherokee. Inclusion of a population group is based on a population threshold. Summary File 2 provides less geographic detail than Summary File 1. The lowest level of geography in Summary File 2 is the census tract.

In the past, these data products were tabulated in three phases:

1. State based geographies such as states, counties and cities
2. National level geographies such as Metropolitan Statistical Areas and Congressional Districts
3. Additional urban and rural geographies whose boundaries were defined based on Census 2000 results

For 2010, geographic coverage will include the United States and Puerto Rico. These products provide the most geographically detailed results from the Decennial Census with data being provided to the block level except as noted in Summary File 2.

Ad Hoc Tabulation
For Census 2000, ad hoc tabulations are available from two different microdata files: the Hundered Percent Detail File (HDF) and the Sample Edited Detail File. For the 2010 Decennial Census, similar ad hoc query capabilities will be expected from a single microdata file similar to the HDF.

Public Use Microdata Sample (PUMS) Files
For Census 2000, two sets of PUMS files were produced: the 1-percent PUMS files containing a fuller range of characteristics for a less detailed geographic network, and the 5-percent PUMS files containing fewer characteristics for a more detailed geographic network. For the 2010 Decennial Census, a single set of PUMS files is expected..

3.3.1.2   2010 Island Area Census Data Products
Data products for the 2010 Island Area Census are not yet defined but are likely to consist of the typical data files produced for prior censuses. Data characteristics collected and tabulated for each Island Area may vary based on local needs but will include the basic demographic characteristics and more detailed characteristics such as citizenship, journey to work, disability status, educational attainment and more. The final decision on the data characteristics for the 2010 Island Area Census will be made by subject matter areas of the Census Bureau.

For Census 2000, a separate summary file was tabulated for each Island Area, and a PUMS file was produced for Guam only. No ad hoc tabulations were offered. For the 2010 Decennial Census, separate summary files and PUMS files for each Island Area are expected..

Geographic coverage includes American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands. .

3.3.1.3   Redistricting Data Office (RDO) Tabulation Products
The Redistricting Data Office requires products from each Decennial Census to fulfill the legal mandate of Public Law 94-171 to provide data to the states for legislative redistricting. Additionally, the RDO provides data products to Congress for newly drawn Congressional Districts after each Decennial Census and biannually through the decade if Congressional District boundaries change.

2008 Dress Rehearsal (DR) Tabulation

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The purpose of the DR tabulation product is to provide a prototype of the 2010 Census Redistricting (Public Law 94-171) data and geographic products to key stakeholders. Tabulation data products are yet to be defined but will be based on the hundred percent data characteristics as described in 3.3.1.1. The product content will be similar to the Census 2000 Redistricting Data Summary File.

Another purpose of the DR is to provide an end-to-end test of the Decennial systems. DADS will participate in the test by tabulating DR data using the legacy DADS DPP system. While use of the legacy system allows the end-to-end test to proceed on schedule, it fails to meet the goal of demonstrating system readiness of the DADS replacement tabulation system. Therefore, for tabulation activities only, DADS will conduct a delayed Dress Rehearsal testing in which prototype data products are recreated using the DADS replacement tabulation system.

Geographic coverage is limited to the 2008 Dress Rehearsal sites and related geographic areas in California and North Carolina.

2010 Census Redistricting Data (Public Law 94-171)
The Census Redistricting Data fulfills the mandate of Public Law 94-171 to provide state legislatures with small-area census population totals for legislative redistricting. Data products for the 2010 Census Redistricting release are defined, tabulated and released at the specific direction of the Redistricting Data Office. Tabulations are based on the hundred percent data characteristics described in 3.3.1.1. For 2000, a summary file was tabulated; for the 2010 Census, DADS expects a similar approach.

Geographic coverage is limited to the United States and Puerto Rico. Data are tabulated one time as a complete set.

Congressional District Data
Congressional District data products based on the 2010 Census results are not yet defined. Data products for this release are defined, tabulated and released at the specific direction of the Redistricting Data Office. Tabulations are based on the hundred percent data characteristics described in 3.3.1.1. For 2000, a summary file was tabulated; for 2010 DADS expects a similar approach and the DADS Program will tabulate the hundred-percent component of the Congressional District Data.

In 2000, an additional summary file tabulation was created from the detailed characteristics referred to as the "sample" component of the Census 2000. The detailed data characteristics include citizenship, journey to work, disability status, educational attainment, income and more. For 2010, the Decennial Census does not contain a sample component and therefore, the DADS Program will not tabulate a Congressional District Data Product based on sample data.

Geographic coverage is limited to the United States and Puerto Rico. Data are tabulated one time as a complete set.

3.4   Dissemination Data Product Descriptions
The descriptions below provide an overview of the major census and survey products listed in Appendix I. Each brief overview identifies the mix of product types to be disseminated, the preferred release flow, any special requirements such as dual language, and an indication of the geographic coverage and complexity.

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Appendix I specifies the list of individual product releases according to the release cycle and schedule required by the data providers. Unknown release dates are denoted as "to be determined" (TBD). For definitions and examples of detailed product formats (e.g., quick tables, base/detailed tables, etc.) referenced in this section, see Appendix F: Dissemination Object Descriptions.

Dissemination operations require that data products be available for data provider review prior to public release. This allows each data provider the capability to review the data, the product formats and layout, and the geographic content for accuracy, quality, and completeness. Corrections and redeliveries are often made during this review period to finalize and approve the data products for public release. The timing and delivery of products to the internal environment, the extent of the review and revision cycle, and the method of subsequent public release are negotiated with each program area by the DADS staff. Dissemination Operations also include the maintenance of the publicly released data products, and the processing of revised data or metadata as needed to correct problems discovered after release.

3.4.1 Decennial Directorate
The Decennial Directorate sponsors dissemination of data products from the Decennial Census, Island Area Censuses, American Community Survey, and Puerto Rico Community Survey.

3.4.1.1 2010 Decennial Census Data Products
Data products for the 2010 Decennial Census are not yet defined but are likely to consist of some combination of standard data presentation formats such as detailed tables, quick tables, geographic comparison tables, thematic maps, reference maps, and printed reports. These presentation formats were grouped as data files and referred to as Summary File 1 and Summary File 2 for the Census 2000. The BRD references the data products in the same manner for 2010 because official product names have not been established.. For 2010, a Public Use Microdata Sample (PUMS) File product may also be released.

In the past, these data products were released in three phases:

1. State based geographies such as states, counties and cities in groups of states over a period of time.
2. National level geographies such as Metropolitan Statistical Areas and Congressional Districts.
3. Additional urban and rural geographies whose boundaries were defined based on Census 2000 results.

The DADS Program assembled all of the geographic areas released in each phase into one complete summary file, with a single point of access on-line via AFF.

For 2010, geographic coverage will include the United States and Puerto Rico. These products provide the most geographically detailed results from the Decennial Census with data being provided to the block level.

Public Use Microdata Sample (PUMS) File
For Census 2000, two sets of PUMS files were produced: the 1-percent PUMS files containing a fuller range of characteristics for a less detailed geographic network, and the 5-percent PUMS files containing fewer characteristics for a more detailed geographic network. For the 2010 Decennial Census, a single set of PUMS files is expected

USCENSUSBUREAU

3.4.1.2   2010 Island Area Census Data Products

Data products for Island Areas are not yet defined but will consist of some combination of standard data presentation formats such as detailed tables, quick tables, geographic comparison tables, reference maps, associated metadata and technical documentation, and printed reports. While the product types for each Island Areas will be similar, the data content will differ among the Island Areas. For 2010, a PUMS File product may also be released.

Geographic coverage includes American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands. Data products for each Island Area are released separately.

3.4.1.3   Redistricting Data Office Data Products

The Redistricting Data Office requires products from each Decennial Census to fulfill the legal mandate of Public Law 94-171 to provide data to the states for legislative redistricting. Additionally, the RDO provides data products to Congress for newly drawn Congressional Districts after each Decennial Census and biannually through the decade if Congressional District boundaries change.

2010 Census Redistricting Data (Public Law 94-171)
The data products for the 2010 Decennial Census redistricting cycle are not yet defined but are likely to consist of some combination of standard data presentation formats such as detailed tables, quick tables, geographic comparison tables, thematic maps, reference maps, and associated metadata and technical documentation.

Geographic coverage is limited to the United States and Puerto Rico. Data products are released one time as a complete set.

Congressional District Data
Congressional District data products based on the 2010 Decennial Census results are not yet defined but are likely to consist of some combination of standard data presentation formats such as detailed tables, quick tables, geographic comparison tables, thematic maps, reference maps, and associated metadata and technical documentation.

After redistricting occurs, census data are tabulated for the new Congressional Districts within each state. Thereafter, for each new Congress seated every 2 years, there is the potential that one or more states may change their Congressional District boundaries. When this occurs, the most recent census data are disseminated for the newly defined Congressional District boundaries. The data product releases are timed for the seating of each new Congress in the January following the election.

Geographic coverage is limited to the United States and Puerto Rico. Data products are released one time as a complete set.

3.4.1.4   American Community Survey (ACS) Data Products

Data products for the ACS include base/detailed tables, narrative profiles, data profiles, comparison profiles (multi-year profiles), ranking tables, geographic comparison tables, subject tables, selected population profiles (iterated and non-iterated), thematic maps, reference maps, PUMS, quality measures, and associated metadata and technical documentation.

Prior to the 2005 survey, the ACS was in a test and demonstration phase in order to refine and develop survey methodologies, evaluate and analyze results, and finalize product presentation formats. During the test and demonstration phase , the ACS geographic coverage and survey sample was limited. For the

USCENSUSBUREAU

2005 survey, the ACS expanded to full sample and released data for geographies with populations of 65,000 or more. For smaller geographies, it will take three to five years to accumulate a large enough sample to produce releasable estimates. Once those data are collected, the Census Bureau will release tabulations annually based on three-year period data for geographies with populations between 20,000 and 65,000, and five-year period data for geographies as small as census tracts (see additional information at http://www.census.gov/acs/www). Figure 3-1, summarizes the ACS release schedule.

Each ACS annual release contains many data products that are released in several "waves" throughout the calendar year. Four waves have been identified in Appendix H, Tabulation Product Deliverables for the release of the 2005 survey estimates. For future survey years and three- and five-year period estimates, ACS is still determining the release schedule and mechanism. DADS is assuming that future ACS survey years will be released in three waves; however, this annual release cycle is subject to change based on program needs.

Type of Data	Population Size of Area	Data For The Previous Year or Combination of Years Would be Released In The Summer Of:						
		2006	2007	2008	2009	2010	2011	2012
Single-year estimates	65,000+	————————————————————————————————▶						
3-year estimates	20,000+			——————————————————————————▶				
5-year estimates	Down to Census Tract and Block Group					——————————————▶		

Figure 3-1 ACS Data Release Schedule

3.4.1.5   Puerto Rico Community Survey Data Products
Data products for the Puerto Rico Community Survey (PRCS) are similar to those of the ACS and include base/detailed tables, narrative profiles, data profiles, comparison profiles (multi-year profiles), ranking tables, geographic comparison tables, subject tables, selected population profiles (iterated and non-iterated), thematic maps, reference maps, PUMS, quality measures, and associated metadata and technical documentation.

Annual, 3-year, and 5-year estimates will be released; all products will be released in both Spanish and English. The English version of the PRCS data will be released with the stateside American Community Survey as an integrated set of products. The Spanish release will lag the English release to allow time to translate products.

Geographic coverage is limited to Puerto Rico.

3.4.2   Demographic Directorate
The Demographic directorate provides population estimates data products.

USCENSUSBUREAU

3.4.2.1   Population Estimates Data Products
Data products for the Population Estimates include detailed tables, geographic comparison tables, thematic maps and reference maps.

A subset of data items from the Population Estimates program is released on AFF in multiple phases of increasing geographic detail. Four phases of release are supported for a given year:

1. A release for the United States, Regions, Divisions and States;
2. A release for Counties;
3. A release for Cities, Towns and County Subdivisions; and
4. A release for Metropolitan and Micropolitan Statistical Areas.

The primary dissemination vehicle is the Population Division's web site (http://www.census.gov/popest/estimates.php), with AFF acting as a secondary dissemination vehicle for selected data items. The public release of the estimates on AFF is always after the public release on the Population Division web site. Public release by the DADS Program is within five business days of the release on the Population Division's web site.

3.4.3   Economic Directorate
The Economic directorate provides quinquennial economic census data products, annual economic survey data products, and quarterly/monthly economic indicators.

3.4.3.1   Quinquennial Economic Census Data Products
For each Economic Census, the data products are comprised of results from multiple censuses and surveys:

- Economic Census of the United States
- Economic Census of Island Areas
- Business Expense Survey (BES)
- Survey of Business Owners (SBO)
- Commodity Flow Survey (CFS)

Data products include detailed sector-specific data files, economy-wide data files, industry quick reports, geographic quick reports, product quick reports, thematic maps, reference maps, and FTP files.

These data products are released in an on-demand flow over approximately a two-year period as data for specific industries and geographic areas are tabulated and approved.

3.4.3.2   Annual Economic Surveys Data Products

Business Patterns
Data products for the Business Patterns survey will be similar to other economy-wide Economic Census data files and derived products such as quick reports, thematic maps and reference maps. There are three Business Patterns releases for a given year; the first release focuses on data files for county and related geographies; the second release focuses on data files for ZIP Code areas; the third release covers quick reports and thematic maps associated with data files contained in the first release. No quick reports or thematic maps are provided for ZIP Code areas. Geographic coverage is limited to the United States.

USCENSUSBUREAU

<u>Nonemployer Statistics</u>
Data products for the Nonemployer Statistics will likely include economy-wide data files and Reference Maps only. A single release cycle is expected for a given year. Geographic coverage is limited to the United States

<u>Annual Survey of Manufactures</u>
Data products for the Annual Survey of Manufactures (ASM) are likely to remain limited to sector-specific data files. These data products are released in two cycles, with Nation-only data files released first, followed by data files containing Nation and State data. In years ending in 2 and 7, the ASM is published as part of the results of the Economic Census. Geographic coverage is limited to the United States.

3.4.3.3   Economic Indicators

The Economic Directorate of the Census Bureau publishes various Economic Indicators on a monthly or quarterly schedule (see http://www.census.gov/cgi-bin/briefroom/BriefRm). The DADS Program will work with the Economic Directorate to analyze the current dissemination process and ultimate presentation of these indicators on the Internet to:
        1) improve access and visibility for end users and,
        2) provide a standardized mechanism for release and presentation on the Internet.

The result of this analysis could result in the physical migration of the Economic Indicators to the American FactFinder dissemination system.

4.   ATTRIBUTES OF REQUIREMENTS

Program level requirements were compiled from reviews of current system documentation and discussions with Census Bureau stakeholders. The requirements are consistent with the DADS Program goals and objectives. The requirements are documented in the Action/Object Matrices and associated artifacts (see Appendices A to I).

Each of the requirements in the Action/Object Matrices is listed as a separate record in the DADS Requirements Database. The database is maintained by the Government, and will be used by the Contractor to manage system requirements and maintain requirements traceability throughout the system life cycle. The database fields are presented in Table 4-1.

Table 4-1. Requirements Database Fields

Database Fields	Description
ID	Unique identifier for each requirement
Service	Either tabulation or dissemination
Type	Includes types highlighted in Section 3.1 (Table 3-1)
Statement	Actual requirement statement, for example "The system shall … "
Source Document	Original source document from which the requirement originated
Stakeholder	Organization or Office that originated the requirement
Related Requirement	Other requirements that may be related
Supplemental Information	Additional information that may be pertinent to the requirement

USCENSUSBUREAU

The requirements are grouped into mutually exclusive categories as presented in Table 4-2.

Table 4-2. Requirements Categories

Category	Description
External Interfaces	Interfaces to external systems such as the FTP server
User Needs	Describes user needs
Functional	Describes functional requirements
Legal Standards	Includes Title 13 of the U.S. Code, Section 508 and P.L. 94-171
Internal Standards	Describes internal Census Bureau standards such as IT security and privacy
Performance and Quality	Includes performance requirements such as responsiveness, availability, and reliability. Also includes quality requirements
Systems Engineering and Security	Describes engineering requirements (e.g., architecture) Describes security requirements
Data Content	Describes data format and content requirements
Operational	Describes operational requirements (e.g., day-to-day usage)

5.   REQUIREMENTS TRACEABILITY

The Contractor will be responsible for managing system requirements and maintaining backward and forward traceability between Program Goals and Objectives, program level requirements and system level requirements throughout the systems life cycle (see Section C.4.3, DADS Requirements Management and Section J.9, Requirements Management Plan). The Contractor will maintain an automated requirements repository that tracks requirements by release and version.

USCENSUSBUREAU

APPENDIX A. TABULATION ACTION/OBJECT MATRIX

See Excel spreadsheet "Tabulation Action-Object Matrix"

The purpose of the matrix is to provide a high-level view of the system functions. Instructions for reading the matrix:

Columns represent system objects.

- In general, the objects are classified as either inputs or outputs of the system.
- Detailed definitions are provided in Appendix C, Tabulation Object descriptions.

Rows represent system actions.
- The x's represent the application of an action to a specific object.
- Each row is written as a requirements statement in Appendix B, Tabulation Requirements Statements.
- The row requirement number corresponds to the requirements statement in Appendix B, Tabulation Requirements Statements.
- Additional, general requirements beyond system functions are included in Appendix B, Tabulation Requirements Statements.

USCENSUSBUREAU

APPENDIX B: TABULATION -REQUIREMENTS STATEMENTS

This list of stated requirements represents the current DADS program level tabulation requirements, based on the analysis of Appendix A, Tabulation Action/Object Matrix the detailed descriptions of objects in Appendix C, Tabulation Object Definitions and additional requirements that pertain to the overall functionality of the tabulation process.

DADS tabulation operations consist of three distinct activities: batch tabulation processes, ad hoc tabulation processes, and Public Use Microdata Sample (PUMS) file creation. All requirements listed below apply to all activities unless otherwise noted. See Appendix A, Tabulation Action/Object Matrix for a consolidated reference.

1. The system shall perform extract, transform and load operations for
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata
   e. Product Content Specifications (General)
   f. Product Tabular Specifications
   g. Product Characteristic Iteration Specifications
   h. Product Microdata Specifications
   i. Product Geographic Levels for Aggregation
   j. Validation Specifications
   k. Verification Files

Extract, transform, and load geographic, demographic and verification data and specification metadata.

2. The system shall perform data linkage for
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data

Combine geographic, housing, and population data based on their relationships.

3. The system shall perform automated data verification on
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata

Examine data for format, content, completeness and structural integrity.

4. (Batch tabulation only) The system shall generate exceptions lists for
   a. Product Content Specifications (General)
   b. Product Tabular Specifications
   c. Product Characteristic Iteration Specifications
   d. Product Geographic Levels for Aggregation
   e. Validation Specifications

USCENSUSBUREAU

Compare updates to specifications for product content and tabulation definitions to resolve discrepancies and updates.

5. The system shall create recodes for
      a.   Record Level Data (Microdata)
      b.   Record Level Supplemental Data
      c.   Geographic Data
      d.   Metadata

Create new categorizations of values defined for a characteristic; create new fields based on the combined values of existing characteristics; create metadata corresponding to these recodes.

6. (Batch tabulation only) The system shall create inputs for
      a.   Record Level Data (Microdata)
      b.   Record Level Supplemental Data
      c.   Geographic Data
      d.   Metadata
      e.   Product Content Specifications (General)
      f.   Product Tabular Specifications
      g.   Product Characteristic Iteration Specifications
      h.   Product Geographic Levels for Aggregation
      i.   Validation Specifications
      j.   Verification Files

Create new or additional microdata, specifications, and verification files.

7. (Batch tabulation only) The system shall display inputs for
      a.   Record Level Data (Microdata)
      b.   Record Level Supplemental Data
      c.   Geographic Data
      d.   Metadata
      e.   Product Content Specifications (General)
      f.   Product Tabular Specifications
      g.   Product Characteristic Iteration Specifications
      h.   Product Geographic Levels for Aggregation
      i.   Validation Specifications
      j.   Verification Files

Display the metadata for the components of each product; display unit records and verification.

8. (Batch tabulation only) The system shall modify inputs for
      a. Record Level Data (Microdata)
      b. Record Level Supplemental Data
      c. Geographic Data
      d. Metadata
      e. Product Content Specifications (General)
      f. Product Tabular Specifications
      g. Product Characteristic Iteration Specifications
      h. Product Geographic Levels for Aggregation
      i. Validation Specifications

USCENSUSBUREAU

j. Verification Files

Modify the metadata for the components of each product; modify unit records and verification data.

9. (Batch tabulation only) The system shall delete inputs for
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata
   e. Product Content Specifications (General)
   f. Product Tabular Specifications
   g. Product Characteristic Iteration Specifications
   h. Product Geographic Levels for Aggregation
   i. Validation Specifications
   j. Verification Files

Delete the metadata for the components of each product; delete unit records and verification data.

10. (Ad hoc tabulation only) The system shall perform iterative ad hoc data tabulations using inputs to create reports
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata
   e. Summarized Data
   f. Reports

Create ad hoc cross-tabulations using record level data and iterate these tabulations across multiple geographies to provide a separate report of each iteration.

11. (Ad hoc tabulation only) The system shall apply ad hoc tabulation composition rules
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata
   e. Summarized Data

Apply metadata instructions in accordance with Census Bureau disclosure policy to guide the selection of parameters in the composition of an ad hoc tabulation and its release.

12. (Batch and ad hoc tabulation only) The system shall allow the user to filter input and output data for
   a. Record Level Data (Microdata)
   b. Record Level Supplemental Data
   c. Geographic Data
   d. Metadata
   e. Summarized Data

Allow user to selectively restrict or eliminate certain characteristics from the processing.

13. (Batch and ad hoc tabulation only) The system shall allow the user to save input and output data for

USCENSUSBUREAU

    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Summarized Data

Allow user to electronically save input and output data.

14. (Batch and ad hoc tabulation only) The system shall allow the user to export input and output data for
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Summarized Data
Allow user to export input and output data.

15. (Batch and ad hoc tabulation only) The system shall allow the user to print input and output data for
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Summarized Data
Allow user to print input and output.

16. (Batch and ad hoc tabulation only) The system shall allow the user to select tabulation criteria for
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata

Allow user to interactively select tabulation criteria.

17. (Batch and ad hoc tabulation only) The system shall allow the user to obtain tabulations on demand using
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Summarized DataAllow user to interactively produce tabulations.

18. (Batch tabulation only) The system shall perform iterative data tabulations on
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Product Content Specifications (General)
    f. Product Tabular Specifications
    g. Product Characteristic Iteration Specifications
    h. Product Geographic Levels for Aggregation
    i. Summarized Data

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The system shall perform batch mode iterative data tabulation.

19. (Public Use Microdata only) The system shall select a sample of microdata records and calculate weights using
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Geographic Data
    d. Metadata
    e. Product Content Specifications (General)
    f. Product Microdata Specifications
    g. Public Use Microdata

Select microdata records using a stratified sampling algorithm and calculate weights for each record so that tabulations based on the sampled records match controlled counts.

20. The system shall verify the data accuracy using inputs and outputs
    a. Verification Specifications
    b. Verification Files
    c. Summarized Data
    d. Public Use Microdata

Verify the results of the cross tabulation counts for tabulation processing, and the results of weight creation for Public Use Microdata.

21. (Batch tabulation only) The system shall perform data matching consistency checks on
    a. Validation Specifications
    b. Verification Files
    c. Summarized Data

Perform automated data verification for batch tabulation processing.

22. (Batch and ad hoc tabulation only) The system shall create derived measures from
    a. Record Level Data (Microdata)
    b. Record Level Supplemental Data
    c. Summarized Data

Apply standard or Census Bureau specified measures.

23. (Batch tabulation only) The system shall apply Census Bureau disclosure rules to
    a. Summarized Data

Apply batch tabulation disclosure rules such as thresholds and rounding to tabulated data according to Census Bureau specifications

24. (Batch tabulation only) The system shall verify the application of Census Bureau disclosure rules to
    a. Summarized Data

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Verify that the application of disclosure rules has appropriately changed the values of the counts or content of the product in accordance with the Census Bureau methodology.

25. (Ad hoc tabulation only) The system shall apply Census Bureau ad hoc disclosure rules to
    a. Summarized Data
    b. Reports

Apply disclosure review to summarized data created in the ad hoc process to restrict the release of tabulations that do not pass pre-established thresholds based on parameters defined by the Census Bureau; provide a report of the results of the application of disclosure rules to ad hoc tables.

26. (Ad hoc tabulation only) The system shall verify the application of Census Bureau ad hoc disclosure rules to
    a. Summarized Data
    b. Reports

Verify that the application of disclosure rules applied to data resulting from ad hoc processing has appropriately blocked the release of tabulations that do not meet the criteria for release defined by the Census Bureau ad hoc disclosure rules.

27. (Batch tabulation and Public Use Microdata only) The system shall enable file transfers of final products to external systems.
    a. Final Product

Provide file transfer capability to allow for the movement of files directly to another server in the batch processing application.

28. (Batch tabulation and Public Use Microdata only) The system shall output technical information on
    a. Final Product

Generate product metadata in a format for handoff to various final media outlets for delivery to end users.

29. The system shall generate final products
    a. Summarized Data
    b. Final Product

Assemble unique sets of tabulations into a comprehensive final product.

30. The system shall generate reports
    a.
    b. Reports

Generate reports at key processing checkpoints.

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APPENDIX C. TABULATION OBJECT DEFINITIONS

Object Name	Object Type	Provider	Recipient	Description
Input				
Record Level Data	Microdata	Census or Survey Divisions	DADS	Record level data includes block level geographic collection data, person data, household data, and group quarters data
Record Level Supplemental Data	Microdata	Census or Survey Divisions	DADS	Additional microdata fields that are derived from the response microdata
Geographic Data	Tabulation Geography	Geography Division	DADS	Block tabulation geography to match the geo-coding in the record level data so that accurate tabulation at various geographic levels can be performed
Metadata	Metadata	Census or Survey Divisions	DADS	Geographic, person, and housing characteristic codes, descriptions, limits, and values for microdata and accuracy statements and subject definitions for products
Product Content Specifications (General)	Specification	Subject Matter Expert Divisions	DADS	A high level description of the products, product parts, and content for census or survey product creation
Product Tabular Specifications	Specification	Subject Matter Expert Divisions, DADS	DADS	- Table layouts and sourcing information - Table title and stub definitions - Derived measure specifications - Disclosure avoidance rules - Rounding rules - Thresholds - Derived measure specifications
Product Characteristic Iteration Specifications	Specification	Subject Matter Expert Divisions	DADS	Particular values of demographic characteristics to use for iteration of tabulations within defined products
Product Microdata Specifications	Specification	Subject Matter Expert Divisions	DADS	- Record Layout - Recode rules - Sampling algorithm - Weighting rules

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Object Name	Object Type	Provider	Recipient	Description
Input				
Product Geographic Levels for Aggregation	Specification	Subject Matter Expert Divisions	DADS	Geographic specifications that provide definitions of the political and statistical entities that will be used for aggregation in the tabulation of the record level data
Verification Specifications	Specification	Subject Matter Expert Divisions, Survey Divisions, DADS	DADS	Consistency matching criteria on which to base tabulation verification within and between products
Verification Files	Related data provided within and outside of DADS	Subject Matter Expert Divisions, Survey Divisions, DADS	DADS	Tabulation data and counts from other sources that will be used to validate the results of production tabulations
Output				
Summarized Data	Data that has been tabulated to specific geographic levels	DADS	DADS, Subject Matter Expert Divisions, Survey Divisions	Tabulation provides counts of the existence of certain characteristics. These counts are summarized for unique geographic areas. Each product definition contains a list of geographic types or "levels"
Public Use Microdata	Microdata records that have been sampled and modified to protect respondent confidentiality	DADS	DADS, Subject Matter Expert Divisions, Survey Divisions	An extraction from full, confidential microdata records taken in a manner that avoids disclosure of information about households or individuals while allowing data users to prepare tabulations using their own tools or systems.
Final Product	Related outputs merged into one product	DADS	DADS, Other product Assemblers	Tabulation products are combinations of a fixed set of one or more unique tabulations that are summarized to predefined geographic levels for the U.S, the fifty states, the District of Columbia, Puerto Rico, and the Island areas. Microdata products are combinations of one or more record extractions.
Reports	Information about system status and program output	DADS	DADS	System status reports, application reports, inventory reports, and other reports generated by system activities

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APPENDIX D: DISSEMINATION ACTION/OBJECT MATRIX

See Excel spreadsheet "Dissemination Action/Object Matrix"

The purpose of the matrix is to provide a high-level view of the current "as is" functional requirements for the dissemination system(s).

Instructions for reading the matrix:

Columns represent system objects.
- In general, the objects are classified as either inputs or outputs of the system.
- Within the categories of inputs and outputs, objects are further grouped into Object Classes. Multiple objects exist within a class.
- Detailed object definitions are provided in Appendix F, Tabulation Object Definitions

Rows represent system actions.
- The x's represent the application of an action to a specific object.
- Each row is written as a requirements statement in Appendix E, Dissemination Requirements Statements.
- The row requirement number corresponds to the requirements statement in Appendix E, Dissemination Requirements Statements.
- . Additionally, general requirements beyond system functions are included in Appendix E, Dissemination Requirements Statements. .
- Shading denotes future requirements which are unmet by the legacy systems.

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APPENDIX E: DISSEMINATION REQUIREMENTS STATEMENTS

This list of stated requirements represents the current DADS program level dissemination requirements, based on the analysis of the Action/Object Matrix in Appendix D.

1. The system shall provide for the extraction, transformation and loading of inputs
   a. Economic Data
   b. Demographic Data
   c. Spatial Data
   d. Geographic Inventory Data
   e. Metadata
   f. Product Specifications

Extract, transform and load system inputs for further processing and data transformation activities.

2. The system shall provide for the verification of inputs
   a. Economic Data
   b. Demographic Data
   c. Spatial Data
   d. Geographic Inventory Data
   e. Metadata
   f. Product Specifications

Verify that inputs conform to specifications in both structure and content.

3. The system shall provide for the creation of inputs
   a. Metadata

   b. Product Specifications

Develop system inputs such as product specifications as needed or requested by program areas.

4. The system shall provide for the creation of outputs
   a. Metadata
   b. Documentation
   c. Printed Reports
   d. Training Materials
   e. Help
   f. Economic Data
   g. Demographic Data
   h. Single Geography Table (see App. F for specific examples)
   i. Multiple Geography Table (see App. F for specific examples)
   j. Base/Detailed Tables
   k. Custom Tables/User Defined Tables
   l. Reference Map
   m. Thematic Map
   n. Charts
   o. Narrative Profiles

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p.   Data Files

Transform inputs into specified product presentation formats.

5.   The system shall provide for the review of outputs
  a.   Metadata
  b.   Documentation
  c.   Printed Reports
  d.   Training Materials
  e.   Help
  f.   Economic Data
  g.   Demographic Data
  h.   Single Geography Table (see App. F for specific examples)
  i.   Multiple Geography Table (see App. F for specific examples)
  j.   Base/Detailed Tables
  k.   Custom Tables/User Defined Tables
  l.   Reference Map
  m.   Thematic Map
  n.   Charts
  o.   Narrative Profiles
  p.   Data Files

Verify correctness of product presentation formats. Allow internal data providers the opportunity to review and clear the data for accuracy and completeness.

6.   The system shall provide for the modification of outputs
  a.   Metadata
  b.   Documentation
  c.   Printed Reports
  d.   Training Materials
  e.   Help
  f.   Economic Data
  g.   Demographic Data
  h.   Single Geography Table (see App. F for specific examples)
  i.   Multiple Geography Table (see App. F for specific examples)
  j.   Base/Detailed Tables
  k.   Custom Tables/User Defined Tables
  l.   Reference Map
  m.   Thematic Map
  n.   Charts
  o.   Narrative Profiles
  p.   Data Files

Correct and update data and product presentation formats.

7.   The system shall provide for the approval of outputs
  a.   Metadata
  b.   Documentation
  c.   Printed Reports
  d.   Training Materials

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    e.   Help
    f.   Economic Data
    g.   Demographic Data
    h.   Single Geography Table (see App. F for specific examples)
    i.   Multiple Geography Table (see App. F for specific examples)

    j.   Base/Detailed Tables
    k.   Custom Tables/User Defined Tables
    l.   Reference Map
    m.   Thematic Map
    n.   Charts
    o.   Narrative Profiles
    p.   Data Files

Approve data and product presentation formats for public release.

8.   The system shall provide for the deployment of outputs
    a.   Metadata
    b.   Documentation
    c.   Printed Reports
    d.   Training Materials
    e.   Help
    f.   Economic Data
    g.   Demographic Data
    h.   Single Geography Table (see App. F for specific examples)
    i.   Multiple Geography Table (see App. F for specific examples)
    j.   Base/Detailed Tables
    k.   Custom Tables/User Defined Tables
    l.   Reference Map
    m.   Thematic Map
    n.   Charts
    o.   Narrative Profiles
    p.   Data Files

Place approved data and product presentation formats on public web site. Also includes the delivery of DADS outputs to other Census Bureau areas with responsibility for product assembly and distribution (e.g., ACSD for printed reports)

9.   The system shall provide for the removal of outputs
    a.   Metadata
    b.   Documentation
    c.   Training Materials
    d.   Help
    e.   Economic Data
    f.   Demographic Data
    g.   Single Geography Table (see App. F for specific examples)
    h.   Multiple Geography Table (see App. F for specific examples)
    i.   Base/Detailed Tables
    j.   Custom Tables/User Defined Tables
    k.   Reference Map
    l.   Thematic Map

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      m. Charts
      n. Narrative Profiles
      o. Data Files

Remove data and product presentation formats from public web site.

10. The system shall provide for the restoration of outputs
      a. Metadata
      b. Documentation
      c. Training Materials
      d. Help
      e. Economic Data
      f. Demographic Data
      g. Single Geography Table (see App. F for specific examples)
      h. Multiple Geography Table (see App. F for specific examples)
      i. Base/Detailed Tables
      j. Custom Tables/User Defined Tables
      k. Reference Map
      l. Thematic Map
      m. Charts
      n. Narrative Profiles
      o. Data Files

Restore data and product presentation formats to public web site.

11. (Future) The system shall provide for archival access to objects
      a. Metadata
      b. Documentation

      c. Training Materials
      d. Help
      e. Economic Data
      f. Demographic Data

      g. Single Geography Table (see App. F for specific examples)
      h. Multiple Geography Table (see App. F for specific examples)
      i. Base/Detailed Tables
      j. Custom Tables/User Defined Tables
      k. Reference Map
      l. Thematic Map
      m. Charts
      n. Narrative Profiles
      o. Data Files

Move selected objects to an archival area. Users continue to have access to the outputs, but with reduced functionality..

12. (Future) The system shall provide for the embargo of outputs
      a. Economic Data
      b. Demographic Data

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  c. Single Geography Table (see App. F for specific examples)
  d. Multiple Geography Table (see App. F for specific examples)
  e. Base/Detailed Tables
  f. Reference Map
  g. Thematic Map
  h. Charts
  i. Narrative Profile
  j. Data Files

Embargo data for specified time period to allow predetermined access to qualified external users (e.g., the media) prior to public release.

13. The system shall allow the end user to bookmark outputs
  a. Metadata
  b. Documentation

  c. Training Materials
  d. Help
  e. External Products
  f. Economic Data
  g. Demographic Data
  h. Single Geography Table (see App. F for specific examples)
  i. Multiple Geography Table (see App. F for specific examples)
  j. Base/Detailed Tables
  k. Custom Tables/User Defined Tables
  l. Reference Map
  m. Thematic Map
  n. Charts
  o. Narrative Profiles

Provide ability to bookmark system objects for later retrieval.

14. The system shall allow the end user to display outputs
  a. Metadata
  b. Documentation

  c. Training Materials
  d. Help
  e. External Products
  f. Economic Data
  g. Demographic Data
  h. Single Geography Table (see App. F for specific examples)
  i. Multiple Geography Table (see App. F for specific examples)
  j. Base/Detailed Tables
  k. Custom Tables/User Defined Tables
  l. Reference Map
  m. Thematic Map
  n. Charts
  o. Narrative Profiles

U S C E N S U S B U R E A U

Render and display content on website.

15. The system shall allow the end user to print outputs
    a. Metadata
    b. Documentation
    c. Training Materials
    d. Help
    e. External Products
    f. Economic Data
    g. Demographic Data
    h. Single Geography Table (see App. F for specific examples)
    i. Multiple Geography Table (see App. F for specific examples)
    j. Base/Detailed Tables
    k. Custom Tables/User Defined Tables
    l. Reference Map
    m. Thematic Map
    n. Charts
    o. Narrative Profiles

Print all or part of an object.

16. The system shall allow the end user to restore selection parameters
    a. Economic Data
    b. Demographic Data
    c. Single Geography Table (see App. F for specific examples)
    d. Multiple Geography Table (see App. F for specific examples)
    e. Base/Detailed Tables
    f. Custom Tables/User Defined Tables
    g. Reference Map
    h. Thematic Map
    i. Charts
    j. Narrative Profiles

Use saved selection parameters to retrieve data and product presentation formats.

17. The system shall allow the end user to save objects
    a. Metadata
    b. Documentation
    c. Training Materials
    d. Help
    e. External Products

Save entire object in fixed format as presented.

18. The system shall allow the end user to save selection parameters
    a. Economic Data

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b. Demographic Data
c. Single Geography Table (see App. F for specific examples)
d. Multiple Geography Table (see App. F for specific examples)
e. Base/Detailed Tables
f. Custom Tables/User Defined Tables
g. Reference Map
h. Thematic Map
i. Charts
j. Narrative Profiles

Save selection parameters for data and product presentation formats.

19. The system shall allow the end user to search to find outputs
    a. Metadata
    b. Documentation

    c. Training Materials
    d. Help
    e. External Products
    f. Economic Data
    g. Demographic Data
    h. Single Geography Table (see App. F for specific examples)
    i. Multiple Geography Table (see App. F for specific examples)
    j. Base/Detailed Tables
    k. Custom Tables/User Defined Tables
    l. Reference Map
    m. Thematic Map
    n. Charts
    o. Narrative Profiles
    p. Data Files

Provide a search capability

20. The system shall allow the end user to select/deselect objects
    a. Metadata
    b. Documentation

    c. Training Materials
    d. Help
    e. External Products
    f. Economic Data
    g. Demographic Data
    h. Single Geography Table (see App. F for specific examples)
    i. Multiple Geography Table (see App. F for specific examples)
    j. Base/Detailed Tables
    k. Custom Tables/User Defined Tables
    l. Reference Map
    m. Thematic Map
    n. Charts

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   o. Narrative Profiles
   p. Data Files

Allow user to select and deselect objects.

 21. The system shall select/deselect objects by geographic area
   a. Economic Data
   b. Demographic Data
   c. Single Geography Table (see App. F for specific examples)
   d. Multiple Geography Table (see App. F for specific examples)
   e. Base/Detailed Tables
   f. Custom Tables/User Defined Tables
   g. Reference Map
   h. Thematic Map
   i. Charts
   j. Narrative Profiles
   k. Data Files

Allow user to select and deselect objects for all applicable geographic areas. Up to 10 million geographic areas are defined by the Census Bureau for the publication of data. These areas are classified into geographic types and organized hierarchically. Geographic selection involves the navigation and selection of the geographic areas in various ways. Note, that not all geographic areas are available for all objects; in addition, data for applicable geographic areas are published on a flow basis over a period of time. For example, Decennial data in the Census 2000 Summary File 1 were released on a state-by-state basis over a period of weeks.

 22. The system shall allow the end user to select/deselect objects by topic
   a. Economic Data
   b. Demographic Data
   c. Single Geography Table (see App. F for specific examples)
   d. Multiple Geography Table (see App. F for specific examples)
   e. Base/Detailed Tables
   f. Custom Tables/User Defined Tables
   g. Reference Map
   h. Thematic Map
   i. Charts
   j. Narrative Profiles
   k. Data Files

Allow user to select and deselect objects by topic area. The Census Bureau publishes both demographic and economic data for numerous topic areas including all sectors of the economy, housing, poverty, school enrollment, age, race, and income to name a few. This selection method involves selection of various objects by topic-based navigation.

 23. The system shall allow the end user to select /deselect objects by population group iterations
   a. Demographic Data
   b. Single Geography Table (see App. F for specific examples)
   c. Multiple Geography Table (see App. F for specific examples)
   d. Base/Detailed Tables
   e. Custom tables/user defined tables

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        f.   Thematic Map

Allow user to select and deselect specific population groups (e.g., Italian ancestry) for which the objects will be shown.

24. (Future) The system shall allow the end user to display errata
        a.   Economic Data
        b.   Demographic Data
        c.   Single Geography Table (see App. F for specific examples)
        d.   Multiple Geography Table (see App. F for specific examples)
        e.   Base/Detailed Tables
        f.   Custom Tables/User Defined Tables
        g.   Thematic Map
        h.   Charts
        i.   Narrative Profiles

Provide errata associated with data elements within the data presentation.

25. (Future) The system shall allow the end user to display geographic changes
        a.   Economic Data
        b.   Demographic Data
        c.   Single Geography Table (see App. F for specific examples)
        d.   Multiple Geography Table (see App. F for specific examples)
        e.   Base/Detailed Tables
        f.   Custom Tables/User Defined Tables
        g.   Thematic Maps
        h.   Charts
        i.   Narrative Profiles

For a given geographic area, provide indication and description of changes in boundary, name or legal status between two data years for a single census or survey.

26. (Future) The system shall allow the end user to reuse selection parameters within a session
        a.   Economic Data
        b.   Demographic Data
        c.   Single Geography Table (see App. F for specific examples)
        d.   Multiple Geography Table (see App. F for specific examples)
        e.   Base/Detailed Tables
        f.   Custom Tables/User Defined Tables
        g.   Reference Maps
        h.   Thematic Maps
        i.   Charts
        j.   Narrative Profiles

Allow a user to navigate between objects without re-specifying those selection parameters that the user wishes to remain constant. For example, allow the user to retain his geographic selection(s) and table title selection(s) while changing just the data year for a given census or survey.

27. (Future) The system shall format objects for printing
        a.   Economic Data

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      b.   Demographic Data
      c.   Single Geography Table (see App. F for specific examples)
      d.   Multiple Geography Table (see App. F for specific examples)
      e.   Base/Detailed Tables
      f.   Custom Tables/User Defined Tables
      g.   Reference Maps
      h.   Thematic Maps
      i.   Charts
      j.   Narrative Profiles

Provide reformatting of data presentation for printing (e.g. portrait or landscape layout, paginating as appropriate).

28.   The system shall allow the end user to create user defined columns within row data
      a.   Economic Data
      b.   Demographic Data
      c.   Custom Tables/User Defined Tables

Allow user to create new data elements from existing elements within a table. Allow the new data element to be populated with the result of a calculation involving data elements within a single row.

29. (Future) The system shall allow the end user to create user defined columns across row data
      a.   Economic Data
      b.   Demographic Data
      c.   Custom Tables/User Defined Tables

Allow user to create new data elements from existing elements within a table. Allow the new data element to be populated with the result of a calculation involving data elements across multiple rows.

30.   (Future) The system shall calculate statistical significance
      a.   Demographic Data
      b.   Single Geography Table (see App. F for specific examples)
      c.   Multiple Geography Table (see App. F for specific examples)
      d.   Base/Detailed Tables
      e.   Custom Tables/User Defined Tables
      f.   Thematic Maps

The statistical significance of the difference in value among selected estimates shall be calculated.

31.   (Future) The system shall allow the end user to re-aggregate data for user defined geographic areas
      a.   Economic Data
      b.   Demographic Data
      c.   Single Geography Table (see App. F for specific examples)
      d.   Multiple Geography Table (see App. F for specific examples)
      e.   Base/Detailed Tables
      f.   Custom Tables/User Defined Tables

Allow users to define their own geographic areas using Census Bureau tabulation areas as building blocks, and provide re-aggregated data results for those user defined geographic areas.

U S C E N S U S B U R E A U

32. (Future) The system shall allow the end user to re-aggregate data for user defined groupings of data characteristic values
    a.   Economic Data
    b.   Demographic Data
    c.   Single Geography Table (see App. F for specific examples)
    d.   Multiple Geography Table (see App. F for specific examples)
    e.   Base/Detailed Tables
    f.   Custom Tables/User Defined Tables
    g.   Thematic Maps

Allow users to define their own groupings of values for a data characteristic, and provide re-aggregated data results for those user defined groupings.

33. (Future) The system shall allow the end user to collapse and expand data categories
    a.   Economic Data
    b.   Demographic Data
    c.   Single Geography Table (see App. F for specific examples)
    d.   Multiple Geography Table (see App. F for specific examples)
    e.   Base/Detailed Tables
    f.   Custom Tables/User Defined Tables

Provide roll-up and drill down access to categories within data presentations.

34. (Future) The system shall allow the end user to re-aggregate data based on a user defined radius
    a.   Economic Data
    b.   Demographic Data
    c.   Reference Maps

Allow user to graphically select a circular area, and provide re-aggregated data for the user defined area.

35. The system shall allow the end user to display statistical significance

    a.   Demographic Data
    b.   Single Geography Table (see App. F for specific examples)
    c.   Multiple Geography Table (see App. F for specific examples)
    d.   Base/Detailed Tables
    e.   Custom Tables/User Defined Tables
    f.   Thematic Map

Census Bureau quality standards for survey data require the display of statistical significance when estimates are compared over time or across geographic areas.

36. The system shall allow the end user to download underlying data without presentation format
    a.   Economic Data
    b.   Demographic Data
    c.   Single Geography Table (see App. F for specific examples)
    d.   Multiple Geography Table (see App. F for specific examples)
    e.   Base/Detailed Tables
    f.   Custom Tables/User Defined Tables

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g.   Reference Map (Future)
h.   Thematic Map

Allow the user to extract data and download it without the specified presentation format of a map or table. For a Reference Map, the underlying data is spatial data rather than statistical data.

37. The system shall allow the end user to download data as displayed within its presentation format
    a.   Economic Data
    b.   Demographic Data
    c.   Single Geography Table (see App. F for specific examples)
    d.   Multiple Geography Table (see App. F for specific examples)
    e.   Base/Detailed Tables
    f.   Custom Tables/User Defined Tables
    g.   Reference Map
    h.   Thematic Map
    i.   Chart (Future)
    j.   Narrative Profile (Future)

Allow the user to download outputs as displayed. That is, with data embedded within the presentation format of a map or table.

38. The system shall format outputs for downloadeding
    a.   Economic Data
    b.   Demographic Data
    c.   Single Geography Table (see App. F for specific examples)
    d.   Multiple Geography Table (see App. F for specific examples)
    e.   Base/Detailed Tables
    f.   Custom Tables/User Defined Tables
    g.   Reference Map (Future)
    h.   Thematic Map

Reformat data and data presentations for downloading, using commonly available desktop software file formats.

39. The system shall allow the end user to filter rows on a value
    a.   Economic Data
    b.   Demographic Data
    c.   Custom Tables/User Defined Tables

Allow the user to apply filters to further subset the selection criteria.

40. The system shall allow the end user to reorder columns
    a.   Economic Data
    b.   Demographic Data
    c.   Custom Tables/User Defined Tables

Allow the user to change the order of the columns within a table.

U S C E N S U S B U R E A U

41. (Future) The system shall allow the end user to transpose rows and columns
    a.   Economic Data
    b.   Demographic Data
    c.   Custom Tables/User Defined Tables

Allow user to select and transpose rows and columns.

42. The system shall allow the end user to select/deselect object columns
    a.   Economic Data
    b.   Demographic Data
    c.   Custom tables/user defined tables

Allow the user to create and change the selection of columns.

43. The system shall allow the end user to select/deselect object rows
    a.   Economic Data
    b.   Demographic Data
    c.   Custom tables/user defined tables

Allow the user to create and change the selection of rows.

44. The system shall allow the end user to sort object rows
    a.   Economic Data
    b.   Demographic Data
    c.   Custom Tables/User Defined Tables

Allow the user to sort the rows of a table by a column value.

45. (Future) The system shall allow the end user to map user specified variables
    a.   Economic Data
    b.   Demographic Data
    c.   Thematic Map

Allow the user to create a variable for mapping by specifying a calculation using existing data elements.

46. The system shall allow the end user to change the map data classing method
    a.   Economic Data
    b.   Demographic Data
    c.   Thematic Map

Thematic maps reveal geographic patterns in statistical data; the underlying data can be classed using different methods (e.g. equal intervals, natural breaks, user defined).

47. The system shall allow the end user to change the scale to a predefined value
    a.   Reference Maps
    b.   Thematic Maps

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Allow the user to increase or decrease the scale of the map by selecting from a finite set of zoom levels. At larger scales, the map will show more feature/boundary details. At smaller scales, the map will show less feature/boundary detail.

48. (Future) The system shall allow the end user to change the scale to a user defined value
    a. Reference Maps
    b. Thematic Maps

Change the scale of the map display to a value specified by the user either explicitly (e.g., enters 1:24,000) or indirectly (e.g., draws a zoom box on map)

49. The system shall allow the end user to change the title
    a. Reference Map

Allow the user to change the title on a reference map.

50. The system shall allow the end user to display attributes for a point on the map
    a. Economic Data
    b. Demographic Data
    c. Reference Map
    d. Thematic Map

Provide for a map identify capability. Attributes returned for the selected point on a thematic map include the identity of the mapped geographic area and its associated data values. Attributes returned for a reference map include the identity of all the geographic areas associated with the selected point.

51. The system shall allow the end user to reposition within a map
    a. Reference Maps
    b. Thematic Maps

Repositioning allows the user to change the center point of the map. The new center point can be indicated explicitly (e.g., entering latitude/longitude coordinates) or indirectly (e.g., touching a point on the map, dragging or panning the map, entering a street address)

52. The system shall allow the end user to select/deselect features, boundaries and labels within a map
    a. Reference Map
    b. Thematic Map

Allow the user to change the display of the map by adding or removing features and boundaries and their associated labels or names.

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APPENDIX F: DISSEMINATION OBJECT DEFINITIONS

Definitions of Dissemination Matrix Objects

Object Name	Description
Inputs - Data	
Economic Data and Demographic Data	Files containing aggregated statistical data or public microdata delivered in formats mutually agreed upon by DADS and the data provider (e.g., ASCII, SAS). Disclosure rules and data quality techniques have been applied to the data prior to delivery. DADS merges data inputs with metadata and geographic inputs to create a complete product output.
Spatial Data	Files containing coordinates that describe the location and shape of geographic boundaries and features, thereby allowing for their depiction in map form. Used to create reference maps, thematic maps and the map-based geographic area selection mechanism.
Geographic Inventory Data	Files containing records for all geographic areas for which statistical data will be released, along with basic attributes such as geographic codes, names and area measurement. Used to label geographies within data presentations and to create the geographic area select/deselect options for each set of objects.
Inputs – Metadata	
Metadata	Metadata inputs describe the structure and content of data files (whether inputs or outputs) and of data presentations, and may encapsulate business rules governing user navigation to these objects. Metadata also documents the methodology of a given census or survey. Metadata is conveyed as a computer readable file.
Product Specifications	Product specifications describe in a complete and verifiable manner the requirements, design, behavior, or characteristics of an output object. Product specifications are conveyed as human readable files or documents.
Outputs – Fixed Format, Static Products	
Metadata	Metadata outputs provide the end user with technical definitions and descriptions of the data results from a census or survey such as geographic area definitions, methodology descriptions, code lists, and subject definitions. To see metadata outputs from American FactFinder: http://factfinder.census.gov/servlet/MetadataBrowserServlet?type=all&id=program&_lang=en
Documentation	Technical definitions and descriptions associated with results of a census or survey; topics covered include geographic area definitions, methodology descriptions, code lists, subject definitions, table outlines, data accuracy statements, and data dictionaries. Census 2000 Summary File 1: http://www.census.gov/prod/cen2000/doc/sf1.pdf American Community Survey: http://www.census.gov/acs/www/index.html 2002 Economic Census http://www.census.gov/econ/census02/pub_text/sector00/cmdesc.htm
Printed Reports	Described generically, printed reports are published reports containing narrative text with supporting tables, maps, and charts on a particular topic. These reports may be available as hardcopy printed documents or as electronic documents in print-ready format such as PDF. Within the context of DADS output objects, Printed Reports refers only to the print-ready table component of a full report. DADS delivers the table component to another Census Bureau area responsible for the assembly and distribution of the full report. An example of a Census 2000 printed report (post-assembly and distribution): http://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf An example in Spanish:

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| Object Name	Description
	http://www.census.gov/prod/cen2000/phc-2-53-sp.pdf
Training Materials	Training materials provide end users with self-guided instruction on how to access and use data products and presentations. Within American FactFinder, training materials are currently provided through the Help system and as individual documents: American FactFinder system tutorials (within Help system): http://factfinder.census.gov/home/en/epss/tutorials.html Guide to 2005 American Community Survey data products in American FactFinder: http://factfinder.census.gov/home/saff/aff_acs2005_quickguide.pdf
Help	Help provides end users with task specific instructions on using the dissemination system. Entry into Help system within American FactFinder http://factfinder.census.gov/home/en/epss/toc.html
External Products	External Products are those products which are not hosted within a DADS dissemination system but to which the system must provide access. Access is provided because of the affinity of an external product with data presentations within the DADS dissemination system. External Products include CD-ROMS, published reports and externally hosted data files. American FactFinder pointer to a CD-ROM: http://factfinder.census.gov/servlet/ProductBrowserServlet?id=101652&product=Census%202000%20Summary%20File%201%20%28SF%201%29%20100-Percent%20Data%20CD-ROM&_lang=en American FactFinder pointer to a published report: http://factfinder.census.gov/servlet/ProductBrowserServlet?id=101855&product=Census%202000%20Brief%20-%20Age%3A%202000&_lang=en American FactFinder pointer to externally hosted data files: http://factfinder.census.gov/home/en/acs_pums_2005.html
Outputs – Data	
Economic Data	Individual economic data points or characteristics from multiple sources presented in charts, graphs, maps, tables or narrative text format. Economic Indicator example: http://www.census.gov/cgi-bin/briefroom/BriefRm American FactFinder entry point to Economic Census data outputs: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ECN&_lang=en&_ts=143572964578 American FactFinder entry point to Annual Economic Survey data outputs: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=EAS&_lang=en&_ts=143572899750
Demographic Data	Individual demographic data points or characteristics from multiple sources presented in charts, graphs, maps, tables or narrative text format. The American FactFinder Population Finder tool presents the Total Population from three sources: the most current Population Estimate, Census 2000 and the 1990 Census: http://factfinder.census.gov/servlet/SAFFPopulation?_sse=on American FactFinder entry point to Decennial Census data outputs: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en&_ts=143572699250 American FactFinder entry point to Decennial Census data outputs in Spanish: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_ds_name=DEC_2000_SF1_U&_program=DEC&_lang=es American FactFinder entry point to American Community Survey data outputs: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_lang=en&_ts=143572838250

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Object Name	Description
	American FactFinder entry point to Population Estimates data outputs: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=PEP&_lang=en&_ts=143 572883109
Outputs – Tables	
Single Geography Tables	A table showing multiple characteristics for a single geographic area, within fixed data column headings and fixed data rows. Multiple characteristics may cover a broad spectrum of demographic or economic subjects, or may focus narrowly on a specific topic, population group or industry. Typically sourced from a single data set. Specific types of single geography tables found within American FactFinder follow. *FACT SHEET* Tables designed for novice users as a soft entry into American FactFinder's voluminous data holdings. Fact Sheets contain embedded links to maps, documents and other tables that provide more detail. Unlike most American FactFinder tables, Fact Sheets are sourced from multiple data sets. Demographic Fact Sheet: http://factfinder.census.gov/servlet/ACSSAFFFacts?_submenuId=factsheet_1&_sse=on Economic Fact Sheet: http://factfinder.census.gov/servlet/SAFFEconFacts?_sse=on&_submenuId=business_1 *DEMOGRAPHIC PROFILE / DATA PROFILE* A table showing a broad spectrum of demographic characteristics as magnitudes and/or as derived measures such as percents, means, medians. Content divided thematically into four tables: general, social, economic and housing. Demographic Profiles are produced for the Decennial Census and include counts and derived measures. These tables may be iterated for a specific population group: http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=01000US&-qr_name=DEC_2000_SF1_U_DP1&-ds_name=DEC_2000_SF1_U&-_lang=en&-_sse=on Data Profiles are produced for the American Community Survey and include estimates and the associated margin of error: http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=01000US&-qr_name=ACS_2005_EST_G00_DP1&-ds_name=ACS_2005_EST_G00_&-_lang=en&-_sse=on *COMPARISON PROFILES* A variation on a Data Profile that shows the percent change in each characteristic between the current data year and one or more previous data years. Produced for American Community Survey. (Formerly referred to as a Multi-Year Profile): http://factfinder.census.gov/servlet/MYPTable?_bm=y&-qr_name=ACS_2004_EST_G00_MYP1_15&-geo_id=01000US&-ds_name= *SELECTED POPULATION PROFILES* A condensed version of all four Data Profiles as a single table. The table includes estimates for the total population and for a selected population group (e.g., Chinese). Produced for American Community Survey: http://factfinder.census.gov/servlet/IPTable?_bm=y&-qr_name=ACS_2005_EST_G00_S0201&-qr_name=ACS_2005_EST_G00_S0201PR&-qr_name=ACS_2005_EST_G00_S0201T&-qr_name=ACS_2005_EST_G00_S0201TPR&-geo_id=01000US&-geo_id=NBSP&-reg=ACS_2005_EST_G00_S0201:006;ACS_2005_EST_G00_S0201PR:006;ACS_2005_EST_G00_S0201T:006;ACS_2005_EST_G00_S0201TPR:006&-ds_name=ACS_2005_EST_G00_&-_lang=en&-format= *SUBJECT TABLES / QUICK TABLES* A table showing multiple characteristics narrowly focused on a specific topic or population group.

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Object Name	Description
	Quick Tables are produced for the Decennial Census: http://factfinder.census.gov/servlet/QTTable?_bm=y&-qr_name=DEC_2000_SF1_U_QTP1&-geo_id=01000US&-ds_name=DEC_2000_SF1_U&-_lang=en&-redoLog=false&-_sse=on Subject Tables are produced for the American Community Survey: http://factfinder.census.gov/servlet/STTable?_bm=y&-qr_name=ACS_2005_EST_G00_S2002&-geo_id=01000US&-ds_name=ACS_2005_EST_G00_&-format=&-CONTEXT=st *GEOGRAPHIC QUICK REPORT* A table showing a few key measures for a broad spectrum of industries. Produced for the Economic Census and Economic Surveys: http://factfinder.census.gov/servlet/GQRTable?_bm=y&-geo_id=01000US&-ds_name=EC0200A1&-_lang=en *PRODUCT QUICK REPORT* A table showing a few key measures for many product lines within a single industry or for many industries within a single product line. Currently only available for one geographic area, the United States because data is too sparse for smaller geographic areas. Produced for the Economic Census: http://factfinder.census.gov/servlet/PQRTable?_bm=y&-ds_name=EC0200SL1&-MFG=313113&-ib_type=NAICS2002&-ib_code=31&-_lang=en
Multiple Geography Tables	A table showing one or more characteristics for multiple geographic areas, within fixed data column headings and variable geographic row stubs. Values are typically shown as derived measures to facilitate comparisons across geographies. Typically sourced from a single data set. Specific types of multiple geography tables found within American FactFinder follow. *GEOGRAPHIC COMPARISON TABLE* Geographies organized into hierarchical structures or alphabetized inventory lists. Includes one or more demographic characteristics. A Decennial Census example, containing multiple characteristics: http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=&-ds_name=DEC_2000_SF1_U&-_lang=en&-redoLog=true&-mt_name=DEC_2000_SF1_U_GCTP5_US10&-format=US-10|US-10S&-CONTEXT=gct An American Community Survey example, containing a single characteristic: http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=&-ds_name=ACS_2005_EST_G00_&-_lang=en&-mt_name=ACS_2005_EST_G00_GCT0101_US37&-format=US-37&-CONTEXT=gct *RANKING TABLE* Geographies listed in rank order for a single demographic characteristic. Produced for American Community Survey http://factfinder.census.gov/servlet/GRTTable?_bm=y&-_box_head_nbr=R1001&-ds_name=ACS_2005_EST_G00_&-format=US-30&-CONTEXT=grt *INDUSTRY QUICK REPORT* Geographies listed alphabetically. Table focus is on a single industry. Produced for the Economic Census and Economic Surveys: http://factfinder.census.gov/servlet/IQRTable?_bm=y&-ds_name=EC0200A1&-NAICS2002=236118&-_lang=en
Base/Detailed Table	A table showing multiple characteristics for one or more geographic areas. May be iterated for one or more population groups. These tables have variable geographic area column headings and fixed data row stubs, and are sourced from a single data set. Decennial Census example: http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-reg=DEC_2000_SF2_U_PCT002:001|004|005;&-ds_name=DEC_2000_SF2_U&-

Object Name	Description
	CONTEXT=dt&-mt_name=DEC_2000_SF2_U_PCT002&-tree_id=402&-redoLog=true&-all_geo_types=N&-_caller=geoselect&-geo_id=05000US09001&-geo_id=05000US09003&-geo_id=05000US09005&-geo_id=05000US09007&-geo_id=05000US09009&-geo_id=05000US09011&-geo_id=05000US09013&-geo_id=05000US09015&-search_results=01000US&-format=&-_lang=en American Community Survey example: http://factfinder.census.gov/servlet/DTTable?_bm=y&-geo_id=01000US&-ds_name=ACS_2004_EST_G00_&-_lang=en&-mt_name=ACS_2004_EST_G2000_B01001&-format=&-CONTEXT=dt
Custom Table/User Defined Table	A table showing one or more selected characteristics for one or more selected geographic areas. Currently within American FactFinder, these tables are created from base/detailed tables by selection of one or more data elements from multiple tables within a single data set. The table's data column headings and geographic row stubs are variable in response to the user's selections. Sample American FactFinder custom table: http://factfinder.census.gov/servlet/CTTable?_bm=y&-context=ct&-reg=DEC_2000_SF2_U_PCT001:004;&-ds_name=DEC_2000_SF1_U&-mt_name=DEC_2000_SF1_U_P012&-tree_id=4001&-redoLog=true&-all_geo_types=N&-geo_id=02000US1&-geo_id=02000US2&-geo_id=02000US3&-geo_id=02000US4&-search_results=01000US&-dataitem=DEC_2000_SF1_U_P012.P012003|DEC_2000_SF1_U_P012.P012027&-format=&-_lang=en
Outputs – Maps	
Reference Map	A map that shows selected geographic boundaries with identifiers along with selected orienting features such as roads and water bodies. Sample American FactFinder reference map: http://factfinder.census.gov/servlet/ReferenceMapFramesetServlet?_bm=y&-geo_id=38000US1602&-_yp=Census%202000&-PANEL_ID=rm_result&-tree_id=420&-errMsg=&-_lang=en&-redoLog=false&-rm_config=|b=50|l=en|t=420|zf=0.0|ms=ref_ma_00dec|dw=1.9557697048764706E7|dh=1.4455689123E7|dt=gov.census.aff.domain.map.LSRMapExtent|if=gif|cx=-1159354.4733499996|cy=7122022.5|zl=10|pz=10|bo=315:237:314:313:322:299|bl=361:394:238:392:355:354|ft=350:349:335:389:388:332:331|fl=403:381:204:380:369:379:368|g=01000US Sample American FactFinder reference map in Spanish: http://factfinder.census.gov/servlet/ReferenceMapFramesetServlet?_bm=y&-ds_name=DEC_2000_SF1_U&-bucket_id=50&-tree_id=426&-_caller=dataset&-_lang=es&-redoLog=false&-rm_config=|b=50|l=es|t=426|zf=0.0|ms=ref_stat_00dec_es|dw=2.8302479999999974|dh=2.001790601508492|dt=gov.census.aff.domain.map.SpanishMapExtent|if=gif|cx=-66.583627|cy=18.1997545|zl=7|pz=7|bo=109:108:106:111:110|bl=185:150:149:148:147|ft=142:141:127:181:180:124:123|fl=195:173:161:172:160:171:200|g=04000US72
Thematic Map	A map that reveals geographic patterns in statistical data. Values are typically mapped as derived measures to facilitate comparisons across geographies. Sample American FactFinder thematic map: http://factfinder.census.gov/servlet/ThematicMapFramesetServlet?_bm=y&-_lang=en
Outputs – Other	
Chart	A visual representation using shape, size, color or arrangement to illustrate data patterns and data distributions. Current use of charts within American FactFinder is limited. Chart to graphically compliment a Ranking Table: http://factfinder.census.gov/servlet/GRTChart?_bm=y&-ds_name=ACS_2005_EST_G00_&-_box_head_nbr=R0102&-_req_type=C&-_grtChart=Y&-CONTEXT=grt&-mt_name=ACS_2005_EST_G00_R0102_US30&-redoLog=false&-geo_id=01000US&-format=US-30

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Object Name	Description
	Bar charts embedded within a Narrative Profile: http://factfinder.census.gov/servlet/NPTable?_bm=y&-qr_name=ACS_2005_EST_G00_NP01&-geo_id=01000US&-gc_url=null&-ds_name=
Narrative Profile	A textual summary of demographic highlights for a single geographic area, interspersed with supporting data, tables, maps or charts. Sample American FactFinder narrative profile, with text and bar charts: http://factfinder.census.gov/servlet/NPTable?_bm=y&-qr_name=ACS_2005_EST_G00_NP01&-geo_id=01000US&-gc_url=null&-ds_name=
Outputs – Data Files	
Data Files	Collections of data elements designed for computer manipulation. Data files may contain aggregated data or public use microdata. Files may be disseminated in their entirety or in large subsets of records. American FactFinder Download Center for data files: http://factfinder.census.gov/servlet/DownloadDatasetServlet?_lang=en

Anatomy of a Table

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Anatomy of a Thematic Map

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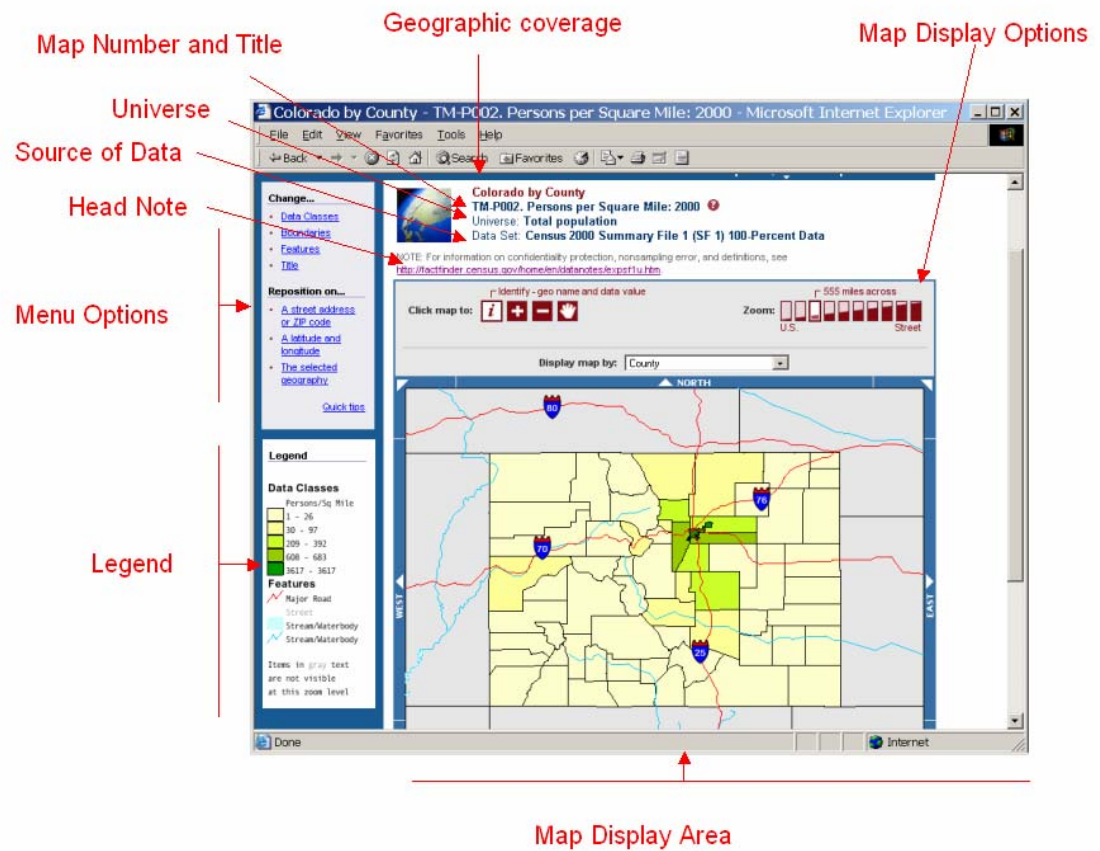
APPENDIX G: NON-FUNCTIONAL REQUIREMENTS, TABULATION AND DISSEMINATION

No.	Type	Statement	Tab.	Dissem.
1	Standards – Agency	The system shall be compliant with Department of Commerce web policies and best practices.		X
2	Standards – Legal	The system shall comply with Section 508 of the Rehabilitation Act Amendments of 1998, Electronic and Information Technology Accessibility Standards, 36 CFR Part 1194.	X	X
3	Standard – Legal	The system shall produce the 2010 Census Public Law (PL) 94-171 Redistricting Product in a time frame to enable the Census Bureau to release data on or before April 1, 2011.	X	X
4	Standards – Census Bureau	The system shall be compliant with Census Bureau Corporate Identity standards.		X
5	Standards - Census Bureau	The system shall be compliant with the Census Bureau IT Standard 15.0.2 Web Development Requirements and Guidelines.		X
6	Standards - Quality	The system shall be compliant with Census Bureau quality standards, including but not limited to: - S10. Definitions of Survey and Census Metadata - S11. Minimal Information to Accompany Any Report of Survey or Census Data - S14., Disclosure Review - S15. Source and Accuracy Statements - S16. Correcting Information That Does Not Comply with Census Bureau Section 515 Information Quality Guidelines - S17. Dissemination of Census and Survey Data Products -	X	X
7	Standards - Quality	The system shall be compliant with Census Bureau quality guidelines, including but not limited to: - G16. Presentation of Statistical Graphics		X
8	Standards - Quality	The system shall employ Census Bureau-approved techniques to ensure adherence to Census Bureau Section 515 Information Quality Guidelines. http://www.census.gov/quality/quality_guidelines.htm	X	X
9	Standards - Quality	The system shall employ Census Bureau-approved techniques to ensure adherence to disclosure avoidance methodologies as stated in S14., Disclosure Review. DADS will obtain Disclosure Review Board approval for the disclosure avoidance methodologies employed by any DADS system which produces data from microdata, unless the data output is an input to a data product for which DRB approval has already been obtained.	X	
10	Operational	The system shall comply with usability criteria to ensure that features, functions, and processes are usable and accessible based on measures to be agreed upon by the Government and the Contractor.	X	X
11	Operational	The system shall be accessible and understandable to a broad range of customer segments with different levels of knowledge and skill.	X	X
12	Operational	The system shall support the efforts of survey sponsors to consult with data users on relevance and appropriateness of data/data products.	X	X
13	Operational	The system shall retain the functions and capabilities from all prior application releases whenever a new application release is implemented.	X	X
14	Operational	The system shall support the most current and widely available end-user platforms (e.g., internet browsers and operating systems) so as to maintain a minimum of 90% of the internet browser market.		X

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No.	Type	Statement	Tab.	Dissem.
15	Operational	The system shall have sufficient disk space to store anticipated datasets, intermediate results, databases, output files, product files, log files, and other permanent records produced according to production schedule.	X	X
16	Operational	The system shall provide accurate results for all data and data products.	X	X
17	Operational	The system shall maintain the integrity and configuration of information and operational details by controlling and tracking creation, alteration, and deletion of inputs and outputs.	X	X
18	Operational	The system shall log external user feedback.		X
19	Operational	The system shall log the occurrence of system exceptions.	X	X
20	Operational	The system shall handle exceptions (e.g., database offline, file system full, file system offline, mapping server failure, and server connectivity failure) without crashing.	X	X
21	Operational	The system shall allow users to resubmit requests after a system task failure.	X	X
22	Performance	The system shall ~~allow access by~~ support a minimum of ~~500~~300 concurrent ad hoc tabulation users.	X	
23	Performance	The system shall ~~allow access by~~support a minimum of ~~5000~~4500 concurrent dissemination users.		X
24	Performance	The system shall redirect external users to a busy page when ~~the concurrent user~~system capacity has been reached~~.~~ (For tabulation applies to Ad Hoc only).	X	X
25	Performance	The system shall be scalable to support a minimum growth rate in annual site visits of 1~~,800,000 site visits per month for an annual total~~5% from the base of ~~21,600,000 by FY 2010.~~ ~~The number of site visits expected during the first year in which the system is deployed, is based on an average of 10% annual growth from~~ 13,431,355 visits per year in 2005.		X
26	Performance	The batch tabulation system shall be scalable to support growth in concurrent users greater than the current estimates through and beyond FY2010.~~available:~~ ~~-98% during the peak processing season for tabulating the PL-94-171 Summary File, and Summary Files 1 & 2.~~ ~~-90% outside of the peak processing season~~ ~~Applies to all system environments.~~ ~~See Appendix H for the schedule of Tabulation Product Deliverables.~~	~~X~~	~~X~~
27	Performance	The ~~tabulation system~~dissemination and Ad Hoc Tabulation applications shall be available: ~~-98% during the peak processing season for tabulating the PL-94-171 Summary File, and Summary Files 1 & 2.~~ ~~-90% outside of the peak processing season~~ - 99% during core business hours (Mon - Fri, 8 am to 8 pm) - 95% during all other times. Applies to all system environments. ~~See Appendix H for the schedule of Tabulation Product Deliverables.~~	X	~~X~~
28	Performance	The ~~dissemination~~ system shall ~~be available:~~ ~~-99% during core business hours (Mon - Fri, 8 am to 8 pm)~~ ~~95% during all other~~achieve query response times for a selection of typical user tasks. ~~Applies to all system environments.~~ Targeted query response times to be agreed upon by the Government and the Contractor after contract award. At a minimum, targets will match response times currently achieved by legacy systems. Selection of typical user tasks to be based on recent patterns in user activities on legacy systems.	~~X~~	X

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No.	Type	Statement	Tab.	Dissem.
29	Performance	The system shall achieve query response times for specified interactions agreed upon by the Government and the Contractor.~~The system shall support a minimum data throughput (both volume of data released and number of concurrent data releases) sufficient to meet the Census Bureau's data release milestones.~~	X	X
30	Performance	The system shall support a minimum data throughput (both volume of data released and number of concurrent data releases) sufficient to meet the Census Bureau's data release milestones.~~The system shall log statistics in accordance with general industry best practices including but not limited to:~~ ~~- All production events regardless of completion status~~ ~~- System availability~~ ~~- System response times for all production events.~~	X	X
31	Performance	The system shall log~~generate logs to derive~~ statistics in accordance with general industry best practices including but not limited to: - All production events regardless of completion status - System availability ~~- Number of unique users~~ ~~- Number of repeat uses~~ ~~- Number of visits~~ ~~- Amount of downloaded data~~ ~~- User requests by product type~~ ~~- User navigation and selection options~~ ~~- User actions that fail to complete~~ - System response times for ~~all production events.~~typical user actions.	~~X~~	X
32	~~Performance~~ ~~External Interface~~	The system shall generate logs to derive statistics in accordance with general industry best practices including but not limited to: - Number of unique users - Number of repeat uses - Number of visits - Amount of downloaded data - User requests by product type - User navigation and selection options - User actions that fail to complete System response times for typical user actions.~~The system shall have an external interface to the FTP server, to support data and/or metadata deliveries from the following data providers:~~ ~~- Decennial Division, outputs from the Response Processing System (RPS)~~ ~~- Geographic Division, outputs from the Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) system~~ ~~- Economic Area outputs from the Economic Metadata Repository (EMR) system~~ ~~- Demographic Area (Population Division) outputs from the tabulation system~~ ~~- American Community Survey Office (ACSO) outputs from the tabulation system~~	~~X~~	X

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No.	Type	Statement	Tab.	Dissem.

33	External Interface	~~The system shall have an external interface to the FTP server, to support data and/or metadata deliveries from the following data providers:~~
		    ~~Decennial Division, outputs from the Response Processing System (RPS)~~
		    ~~Geographic Division, outputs from the Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) system~~
		    ~~Economic Area outputs from the Economic Metadata Repository (EMR) system~~
		    ~~Demographic Area (Population Division) outputs from the tabulation system~~
		    ~~American Community Survey Office (ACSO) outputs from the tabulation system~~
		
		The system shall ensure that updates to a given DADS sub-system do not impact the interfaces to and the operations of dependent sub-systems.
			X	X

34	~~External Interface~~Security	The system shall ensure that updates to a given DADS sub-system do not impact the interfaces to and the operations of dependent sub-systems.~~The system shall provide a secure, role based user access mechanism , including identification and authentication, to deny access to the system by unauthorized internal users within the Census Bureau firewall.~~	X	X
35	Security	The system shall provide a secure, ~~role based user access~~ mechanism ~~, including identification and authentication,~~ to deny access to the system~~Title 13 data and aggregated, unreleased data~~ by unauthorized internal users within the Census Bureau firewall.	X	X
36	Security	The system shall provide a secure mechanism to deny access to ~~Title 13 data and aggregated, unreleased data~~the system by unauthorized ~~internal~~external users ~~within~~outside of the Census Bureau firewall.	X	X
37	Security	~~The system shall provide a secure mechanism to deny access to the system by unauthorized external users outside of the Census Bureau firewall.~~The system shall maintain audit logs for login attempts and password changes.	X	X
38	Security	The system shall maintain audit logs for login attempts and password changes.~~The system shall achieve security certification and accreditation as defined by the Census Bureau Information Technology Security Office.~~	X	X

39	Security	The system shall achieve security certification and accreditation as defined by the Census Bureau Information Technology Security Office.~~The system shall be secured in accordance with Federal laws, standards, policies, and directives, including:~~
		    ~~Title 13 of the U.S. Code~~
		    ~~Federal Information Processing Standard (FIPS) 140-2. http://itl.nist.gov/fipspubs~~
		    ~~National Institute of Standards and Technology (NIST) Special Publications 800-18, 800-30, 800-34, 800-37, and 800-63.~~
		    ~~Department of Commerce IT Security Program Policy.~~
		    ~~Census Bureau's IT Security Program Policies.~~
		    ~~Federal Information Security Management Act (FISMA). http://csrc.nist.gov/sec-cert~~
		    ~~Homeland Security Presidential Directive/HSPD-12.~~
			X	X

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No.	Type	Statement	Tab.	Dissem.
40	Security	~~The system shall be secured in accordance with Federal laws, standards, policies, and directives, including:~~ ~~Title 13 of the U.S. Code~~ ~~Federal Information Processing Standard (FIPS) 140-2.~~ ~~http://itl.nist.gov/fipspubs~~ ~~National Institute of Standards and Technology (NIST) Special Publications 800-18, 800-30, 800-34, 800-37, and 800-63.~~ ~~Department of Commerce IT Security Program Policy.~~ ~~Census Bureau's IT Security Program Policies.~~ ~~Federal Information Security Management Act (FISMA).~~ ~~http://csrc.nist.gov/sec-cert~~ ~~Homeland Security Presidential Directive/HSPD-12.~~The system shall satisfy the security test criteria in accordance with the Census Bureau Security Test and Evaluation Document.	X	X
~~41~~	~~Security~~	~~The system shall satisfy the security test criteria in accordance with the Census Bureau Security Test and Evaluation Document.~~	~~X~~	~~X~~

SOLICITATION NO.
YA1323-~~06~~07-RP-0001

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APPENDIX H: TABULATION PRODUCT DELIVERABLES

The following list of Tabulation Product Deliverables and the Public Release dates should not be considered final or complete. It reflects the current understanding of the tabulation requirements for the DADS Program and is subject to change. Shaded items indicate tabulation products that have already been released to the public and must be maintained by the contractor.

Major Data Product Tabulations/Releases	Public Release (approximate timing)
2000 Census Products	
Ad hoc Tabulations from Hundred Percent Detail File	Released
Ad hoc Tabulations from Sample Edited Detail File	Released
2010 Census Products	
2010 Census Summary File 1	Summer 2011
2010 Census Summary File 2	Winter 2012
Ad hoc Tabulations from Hundred Percent Detail File (if option exercised)	TBD
2010 Public Use Microdata (PUMS) File	TBD
2010 American Samoa Summary File	TBD
2010 Guam Summary File	TBD
2010 Commonwealth of the Northern Mariana Islands Summary File	TBD
2010 U.S. Virgin Islands Summary File	TBD
2010 Island Area Public Use Microdata (PUMS) File	TBD
Redistricting Data Office Products	
2008 Dress Rehearsal Census Redistricting (P.L. 94-171) Summary File (using the legacy system)	Feb 2009
Delayed 2008 Dress Rehearsal Census Redistricting (P.L. 94-171) Summary File (using the replacement system)	Oct 2010
2010 Census Redistricting Data (P.L. 94-171) Summary File	Jan 2011
113th Congressional District Summary File – 100 Percent	Fall 2012
114th Congressional District Summary File – 100 Percent	Fall 2014
Special Tabulations	
School Districts	2013
As requested on a case by case basis throughout the decade using the 2010 short form microdata files	TBD

U S C E N S U S B U R E A U

APPENDIX I: DISSEMINATION PRODUCT DELIVERABLES

The following list of Dissemination Product Deliverables and the Public Release dates should not be considered final or complete. It reflects the current understanding of the dissemination requirements for the DADS Program and is subject to change. Shaded items indicate dissemination products that have already been released to the public and must be maintained by the contractor.

Contract Period Major Data Product Releases	Public Release (approximate timing)
Previous Census Data Products	
1990 Census Summary Tape File 1 - United States	Released
1990 Census Summary Tape File 3 – United States	Released
Census 2000 Summary File 1 – United States and Puerto Rico	Released
Census 2000 Summary File 2 - United States and Puerto Rico	Released
Census 2000 Summary File 3 – United States and Puerto Rico	Released
Census 2000 Summary File 4 – United States and Puerto Rico	Released
Census 2000 American Indian and Alaska Native Summary File	Released
American Samoa Summary File	Released
Guam Summary File	Released
Commonwealth of the Northern Mariana Islands Summary File	Released
U.S. Virgin Islands Summary File	Released
2000 Population and Housing Characteristics Printed Reports – United States and Puerto Rico	Released
2010 Census Products	
2008 Dress Rehearsal Products	TBD
2010 Census Summary File 1 – United States and Puerto Rico	Summer 2011
2010 Census Summary File 2 – United States and Puerto Rico	Winter 2012
2010 Public Use Microdata (PUMS) File – United States and Puerto Rico	TBD
2010 Population and Housing Characteristics Printed Reports – United States and Puerto Rico	TBD
2010 Island Area Products	
2010 American Samoa Summary File	TBD
2010 Guam Summary File	TBD
2010 Commonwealth of the Northern Mariana Islands Summary File	TBD
2010 U.S. Virgin Islands Summary File	TBD
2010 Public Use Microdata (PUMS) File – Island Areas	TBD
2010 Population and Housing Characteristics Printed Reports – Island Areas	TBD
Redistricting Data Office Products	
109th Congressional District Summary File - Sample	Released
109th Congressional District Summary File – 100 Percent	Released
110th Congressional District Summary File - Sample	Released
110th Congressional District Summary File – 100 Percent	Released
Census 2000 Redistricting Data (P.L. 94-171) Summary File	Released
2010 Census Redistricting Phase 1 State Legislative District Files (based on Census 2000)	Released
2010 Census Redistricting Data (P.L. 94-171) Summary File	Mar 2011
113th Congressional District Summary File – 100 Percent	Jan 2013
114th Congressional District Summary File – 100 Percent	Jan 2015
2000 - 2004 American Community Survey	
2000 American Community Survey	Released
2001 American Community Survey	Released

U S C E N S U S B U R E A U

Contract Period Major Data Product Releases	Public Release (approximate timing)
2002 American Community Survey	Released
2003 American Community Survey	Released
2004 American Community Survey	Released
2005 American Community Survey	
2005 American Community Survey, Wave 1	Released
2005 American Community Survey, Wave 2	Released
2005 American Community Survey, Wave 3	Released
2005 American Community Survey, Wave 4	Released
2005 Puerto Rico Community Survey, Wave 1 (Spanish)	Dec 2006
2005 Puerto Rico Community Survey, Wave 2 (Spanish)	April 2007
2006 American Community Survey	
2006 American Community Survey, Wave 1	Aug 2007
2006 American Community Survey, Wave 2	Oct 2007
2006 American Community Survey, Wave 3	Nov 2008
2006 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2006 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2006 American Community Survey PUMS File	TBD
2007 American Community Survey	
2007 American Community Survey, Wave 1	Aug 2008
2007 American Community Survey, Wave 2	Oct 2008
2007 American Community Survey, Wave 3	Nov 2008
2007 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2007 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2005-2007 American Community Survey (3 year averages)	TBD
2005-2007 Puerto Rico Community Survey (3 year averages - Spanish)	TBD
2007 American Community Survey PUMS File	TBD
2008 American Community Survey	
2008 American Community Survey, Wave 1	Aug 2009
2008 American Community Survey, Wave 2	Oct 2009
2008 American Community Survey, Wave 3	Nov 2009
2008 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2008 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2006-2008 American Community Survey (3 year averages)	TBD
2006-2008 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2008 American Community Survey PUMS File	TBD
2009 American Community Survey	
2009 American Community Survey, Wave 1	Aug 2010
2009 American Community Survey, Wave 2	Oct 2010
2009 American Community Survey, Wave 3	Nov 2010
2009 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2009 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2007-2009 American Community Survey (3 year averages)	TBD
2007-2009 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2005-2009 American Community Survey (5 year averages)	TBD
2005-2009 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2009 American Community Survey PUMS File	TBD
2010 American Community Survey	
2010 American Community Survey, Wave 1	Aug 2011

U S C E N S U S B U R E A U

Contract Period Major Data Product Releases	Public Release (approximate timing)
2010 American Community Survey, Wave 2	Oct 2011
2010 American Community Survey, Wave 3	Nov 2011
2010 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2010 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2008-2010 American Community Survey (3 year averages)	TBD
2008-2010 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2006-2010 American Community Survey (5 year averages)	TBD
2006-2010 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2010 American Community Survey PUMS File	TBD
2011 American Community Survey	
2011 American Community Survey, Wave 1	Aug 2012
2011 American Community Survey, Wave 2	Oct 2012
2011 American Community Survey, Wave 3	Nov 2012
2011 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2011 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2009-2011 American Community Survey (3 year averages)	TBD
2009-2011 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2007-2011 American Community Survey (5 year averages)	TBD
2007-2011 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2011 American Community Survey PUMS File	TBD
2012 American Community Survey	
2012 American Community Survey, Wave 1	Aug 2013
2012 American Community Survey, Wave 2	Oct 2013
2012 American Community Survey, Wave 3	Nov 2013
2012 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2012 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2010-2012 American Community Survey (3 year averages)	TBD
2010-2012 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2008-2012 American Community Survey (5 year averages)	TBD
2008-2012 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2012 American Community Survey PUMS File	TBD
2013 American Community Survey	
2013 American Community Survey, Wave 1	Aug 2014
2013 American Community Survey, Wave 2	Oct 2014
2013 American Community Survey, Wave 3	Nov 2014
2013 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2013 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2011-2013 American Community Survey (3 year averages)	TBD
2011-2013 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2009-2013 American Community Survey (5 year averages)	TBD
2009-2013 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2013 American Community Survey PUMS File	TBD
2014 American Community Survey	
2014 American Community Survey, Wave 1	Aug 2015
2014 American Community Survey, Wave 2	Oct 2015
2014 American Community Survey, Wave 3	Nov 2015
2014 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2014 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2012-2014 American Community Survey (3 year averages)	TBD

USCENSUSBUREAU

Contract Period Major Data Product Releases	Public Release (approximate timing)
2012-2014 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2010-2014 American Community Survey (5 year averages)	TBD
2010-2014 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2014 American Community Survey PUMS File	TBD
2015 American Community Survey	
2015 American Community Survey, Wave 1	Aug 2016
2015 American Community Survey, Wave 2	Oct 2016
2015 American Community Survey, Wave 3	Nov 2016
2015 Puerto Rico Community Survey, Wave 1 (Spanish)	TBD
2015 Puerto Rico Community Survey, Wave 2 (Spanish)	TBD
2013-2015 American Community Survey (3 year averages)	TBD
2013-2015 Puerto Rico Community Survey (3 year averages Spanish)	TBD
2011-2015 American Community Survey (5 year averages)	TBD
2011-2015 Puerto Rico Community Survey (5 year averages Spanish)	TBD
2015 American Community Survey PUMS File	TBD
2005 Population Estimates	
2005 Population Estimates, Part 1 (States)	Released
2005 Population Estimates, Part 2 (Counties)	Released
2005 Population Estimates, Part 3 (Places and County Subdivisions)	Released
2006 Population Estimates	
2006 Population Estimates, Part 1 (States)	Dec 2006
2006 Population Estimates, Part 2 (Counties)	Mar 2007
2006 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2007
2007 Population Estimates	
2007 Population Estimates, Part 1 (States)	Dec 2007
2007 Population Estimates, Part 2 (Counties)	Mar 2008
2007 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2008
2007 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2008
2008 Population Estimates	
2008 Population Estimates, Part 1 (States)	Dec 2008
2008 Population Estimates, Part 2 (Counties)	Mar 2009
2008 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2009
2008 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2009
2009 Population Estimates	
2009 Population Estimates, Part 1 (States)	Dec 2009
2009 Population Estimates, Part 2 (Counties)	Mar 2010
2009 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2010
2009 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2010
2011 Population Estimates	
2011 Population Estimates, Part 1 (States)	Dec 2011
2011 Population Estimates, Part 2 (Counties)	Mar 2012
2011 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2012
2011 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2012
2012 Population Estimates	
2012 Population Estimates, Part 1 (States)	Dec 2012
2012 Population Estimates, Part 2 (Counties)	Marc 2013
2012 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2013
2012 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2013
2013 Population Estimates	

U S C E N S U S B U R E A U

Contract Period Major Data Product Releases	Public Release (approximate timing)
2013 Population Estimates, Part 1 (States)	Dec 2013
2013 Population Estimates, Part 2 (Counties)	Mar 2014
2013 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2014
2013 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2014
2014 Population Estimates	
2014 Population Estimates, Part 1 (States)	Dec 2014
2014 Population Estimates, Part 2 (Counties)	Mar 2015
2014 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2015
2014 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2015
2015 Population Estimates	
2015 Population Estimates, Part 1 (States)	Dec 2015
2015 Population Estimates, Part 2 (Counties)	Mar 2016
2015 Population Estimates, Part 3 (Places and County Subdivisions)	Jun 2016
2015 Population Estimates, Part 4 (Metro/Micro Areas)	Spring 2016
Previous Economic Census Data Products	
1997 Economic Census – United States	Released
2002 Economic Census and Surveys – United States	Released
2002 Economic Census and Surveys – Island Areas	Released
2002 Survey of Business Owners	Released
2002 Business Expense Survey	Released
2007 Economic Census	
2007 Economic Census and Surveys – United States	on demand flow release Aug 2008 – June 2012
2007 Economic Census and Surveys – Island Areas	
2007 Survey of Business Owners	Fall 2010
2007 Commodity Flow Survey (CFS) – Preliminary Report	Dec 2008
2007 Commodity Flow Survey (CFS) – Final Release	Fall 2009
2012 Economic Census	
2012 Economic Census and Surveys – United States	on demand flow release Aug 2013 – Jun 2017
2012 Economic Census and Surveys – Island Areas	
2012 Commodity Flow Survey (CFS) – Preliminary Report	Dec 2013
2012 Commodity Flow Survey (CFS) – Final Release	Fall 2014
Economic Survey - Nonemployer Statistics	
2002 Nonempoyer Statistics (released as part of the 2002 Economic Census)	Released
2003 Nonemployer Statistics	Released
2004 Nonemployer Statistics	Released
2005 Nonemployer Statistics	Oct 2007
2006 Nonemployer Statistics (Can be later in years Economic Census data is released)	Oct 2008
2007 Nonemployer Statistics	Oct 2009
2008 Nonemployer Statistics	Oct 2010
2009 Nonemployer Statistics	Oct 2011
2010 Nonemployer Statistics	Oct 2012
2011 Nonemployer Statistics (Can be later in years Economic Census data is released)	Oct 2013
2012 Nonemployer Statistics	Oct 2014
2013 Nonemployer Statistics	Oct 2015
2014 Nonemployer Statistics	Oct 2016
2015 Nonemployer Statistics	Oct 2017

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Contract Period Major Data Product Releases	Public Release (approximate timing)
Economic Survey - Annual Survey of Manufactures	
2004 Annual Survey of Manufactures – Cycle 1	Released
2004 Annual Survey of Manufactures – Cycle 2	Released
2005 Annual Survey of Manufactures – Cycle 1	Released
2005 Annual Survey of Manufactures – Cycle 2	Feb 2007
2006 Annual Survey of Manufactures – Cycle 1	Dec 2007
2006 Annual Survey of Manufactures – Cycle 2	Feb 2008
2007 Annual Survey of Manufactures – Cycle 1 (released as part of the 2007 Economic Census)	Dec 2008
2007 Annual Survey of Manufactures – Cycle 2 (released as part of the 2007 Economic Census)	Feb 2009
2008 Annual Survey of Manufactures – Cycle 1	Dec 2009
2008 Annual Survey of Manufactures – Cycle 2	Feb 2010
2009 Annual Survey of Manufactures – Cycle 1	Dec 2010
2009 Annual Survey of Manufactures – Cycle 2	Feb 2011
2010 Annual Survey of Manufactures – Cycle 1	Dec 2011
2010 Annual Survey of Manufactures – Cycle 2	Feb 2012
2011 Annual Survey of Manufactures – Cycle 1	Dec 2012
2011 Annual Survey of Manufactures – Cycle 2	Feb 2013
2012 Annual Survey of Manufactures – Cycle 1 (released as part of the 2012 Economic Census)	Dec 2013
2012 Annual Survey of Manufactures – Cycle 2 (released as part of the 2012 Economic Census)	Feb 2014
2013 Annual Survey of Manufactures – Cycle 1	Dec 2014
2013 Annual Survey of Manufactures – Cycle 2	Feb 2015
2014 Annual Survey of Manufactures – Cycle 1	Dec 2015
2014 Annual Survey of Manufactures – Cycle 2	Feb 2016
2015 Annual Survey of Manufactures – Cycle 1	Dec 2016
2015 Annual Survey of Manufactures – Cycle 2	Feb 2017
Economic Survey - Business Patterns	
2004 Business Patterns – Cycles 1 (County Data Files)	Released
2004 Business Patterns – Cycle 2 (ZIP Data Files)	Released
2005 Business Patterns – Cycle 1 (County Data Files)	Jun 2007
2005 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2007
2005 Business Patterns – Cycle 3 (Derived Products)	Aug 2007
2006 Business Patterns – Cycle 1 (County Data Files)	Jun 2008
2006 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2008
2006 Business Patterns – Cycle 3 (Derived Products)	Aug 2008
2007 Business Patterns – Cycle 1 (County Data Files)	Jun 2009
2007 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2009
2007 Business Patterns – Cycle 3 (Derived Products)	Aug 2009
2008 Business Patterns – Cycle 1 (County Data Files)	Jun 2010
2008 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2010
2008 Business Patterns – Cycle 3 (Derived Products)	Aug 2010
2009 Business Patterns – Cycle 1 (County Data Files)	Jun 2011
2009 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2011
2009 Business Patterns – Cycle 3 (Derived Products)	Aug 2011
2010 Business Patterns – Cycle 1 (County Data Files)	Jun 20102
2010 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2012

U S C E N S U S B U R E A U

Contract Period Major Data Product Releases	Public Release (approximate timing)
2010 Business Patterns – Cycle 3 (Derived Products)	Aug 2012
2011 Business Patterns – Cycle 1 (County Data Files)	Jun 2013
2011 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2013
2011 Business Patterns – Cycle 3 (Derived Products)	Aug 2014
2012 Business Patterns – Cycle 1 (County Data Files)	Jun 2014
2012 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2014
2012 Business Patterns – Cycle 3 (Derived Products)	Aug 2014
2013 Business Patterns – Cycle 1 (County Data Files)	Jun 2015
2013 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2015
2013 Business Patterns – Cycle 3 (Derived Products)	Aug 2016
2014 Business Patterns – Cycle 1 (County Data Files)	Jun 2016
2014 Business Patterns – Cycle 2 (ZIP Data Files)	Jul 2016
2014 Business Patterns – Cycle 3 (Derived Products)	Aug 2016
Economic Indicators	TBD

U S C E N S U S B U R E A U

APPENDIX J: REFERENCE DOCUMENTS

1.   Bureau of Census Information Technology Plan, 1996
2.   DADS II Requirements Management Plan (RMP)
3.   Data Access and Dissemination Systems Office: An Overview, version 4, Nov 1, 2005

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APPENDIX K: ACRONYMS

ACS	American Community Survey
ACSD	Administrative and Customer Services
ACSO	American Community Survey Office
AFF	American FactFinder
AIAN	American Indian and Alaska Native
AQ	Advanced Query
BES	Business Expense Survey
BOC	Bureau of Census
BRD	Business Requirements Document
CBP	County Business Patterns
CFS	Commodity Flow Survey
COTS	Commercial off- the-shelf
DADS	Data Access and Dissemination System
DADS II	Next Data Access and Dissemination System contract to be covered by RFP
DOC	Department of Commerce
DOORS	Dynamic Object Oriented Requirements System
DPP	Data Product Production
EC	Economic Census
EWKS	Economy-wide Key Statistics
FTP	File Transfer Protocol
HTTP	Hypertext Transfer Protocol
NS	Nonemployer Statistics
O&M	Operations and Maintenance
PDF	Portable Document Format
PRCS	Puerto Rico Community Survey
PUMS	Public Use Microdata Sample
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SBO	Survey of Business Owners
SF	Summary File
SOW	Statement of Work
SRS	System Requirements Specification
TBD	To Be Determined
VTG	Virtual Table Generator

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APPENDIX L: GLOSSARY

Term	Definition
Census	A complete enumeration, usually of a population, but also of businesses and commercial establishments, farms, governments, and so forth.
Choropleth Map	A map showing regions or areas that have the same characteristics.
Customer	Any Census Bureau directorate requiring services from the Data Access and Dissemination Office.
Data Provider	Any Census Bureau organization making Census Bureau data available to the Data Access and Dissemination Office for use in tabulation or dissemination activities.
Data Set	An abstraction used to refer to a collection of products. These collections are typically related to a single tabulation output.
Decennial Census	The census of population and housing, taken by the Census Bureau in years ending in 0 (zero). Article I of the Constitution requires that a census be taken every ten years for the purpose of reapportioning the United States House of Representatives.
Dissemination	The term is used broadly to refer to any activity following the completion of tabulation activities that contributes to putting Census Bureau data and information in the hands of end-users.
Economic Census	Collective name for the censuses of construction, manufactures, minerals, minority- and women-owned businesses, retail trade, service industries, transportation, and wholesale trade, conducted by the Census Bureau every five years, in years ending in 2 and 7.
End User	Anyone, either within or without the Census Bureau, who uses associated Census Bureau data and information.
End User Intermediary	The first line of contact for end users who need assistance in using and understanding dissemination products.
Geographic Data Provider	Internal partners who provide geographic tabular and spatial data and metadata to support tabulation and dissemination.
Geography	Any spatial unit used by the Census Bureau for data collection and tabulation. The spatial unit may be formed by legal or statistical boundaries. Examples are states, counties, places, county subdivisions, census tracts and census blocks. An instance of a spatial unit. For example, Alaska or Middlesex County, Connecticut.
Internet User	Any end-user who gains access to Census Bureau data and information using the Internet.
Intranet	The local and wide-area network maintained by the Census Bureau for internal use. In this paper, the term does not connote exclusive use of the HTTP protocol.
Island Areas	Refers to the following United States territories and protectorates: Virgin Islands of the United States, Guam, Commonwealth of the Northern Mariana Islands, and American Samoa.
Microdata	A collection of data reflecting responses taken from individual data collection instruments.
Metropolitan/Micropolitan Areas	A core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Standards for the definition of each type of area are issued by the Office of Management and Budget (OMB).
Population Estimate	Population estimates are basic population counts released between decennial censuses. Population estimates are released as of July 1 for each year.
Population Projection	Population projections are estimates of future counts of the resident population, families and households
Product	A term used broadly to refer to any Census Bureau sponsored output of Census Bureau data or information.
Product Definer	Any member of a team of individuals responsible for determining the

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Term	Definition
	characteristics of a product, including content and format.
Product Distributor	A Census Bureau organization responsible for activities related to both the production and distribution of Census Bureau data and information for products requiring physical distribution, such as products made available on optical media or in print.
Product Specification	A document providing detailed description of the outputs of a tabulation or dissemination activity.
Program Sponsor	Any Census Bureau organization directly responsible for a census, survey, estimate or projection.
Quinquennial	Occurring every five years; see Economic Census
Reference Map	Maps that graphically describe the bounds of geographies used in tabulation.
Reviewer	Typically, a statistician or analyst responsible for examining the outputs of tabulation or dissemination activities for quality control purposes.
Summary Data	Summary data is a collection of data containing only aggregate representations (counts, sums, medians, means, etc.) of the contents of a microdata source.
Survey	A data collection activity involving observation or questionnaires for a sample of a population.
Survey and Census Data Provider	Internal customers who provide census and survey results for tabulation or dissemination.
Tabulation	A collection of activities required to produce summary data from microdata.
Thematic Map	Maps that are used to visualize geographic patterns in data by coloring or shading each geographic area based on an associated data value.
United States	The 50 states and the District of Columbia.

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