

THE 2010 SOC: A CLASSIFICATION SYSTEM GETS AN UPDATE



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Making sense of occupational data isn't always easy. But the task is less daunting when the data are well organized. For Federal occupational statistics, the Standard Occupational Classification (SOC) system establishes that organization. And a recent revision to the SOC means that the data will be current, in addition to being well organized.

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The SOC assists Federal statistical agencies in organizing the occupational data they collect, tabulate, and analyze. Agencies that use the SOC include the U.S. Department of Labor, National Center for Education Statistics, U.S. Department of Defense, National Science Foundation, and U.S. Census Bureau. By classifying jobs into occupational categories, the SOC provides a standardized way for agencies to share their data.

This article explains the origins of occupational classification, the process for revising the latest SOC, and the results of that revision. It describes the kinds of changes the new SOC incorporates and how the updated system compares with its most recent predecessor. A final section discusses plans for future revisions and where to find more information.

Origins of classification

The Nation's first system for classifying occupations was the 1850 Census of Population, which listed about 320 occupations (such as carpenters, dentists, and lawyers—but also ice dealers, muleteers, and philosophical instrument makers). As data collection

continued into the 20th century, the complexity of the statistics increased. This complexity was due, in part, to a growing number of occupations identified, which created an even greater need for a standard, comparable system of classifying them.

The Federal Government published the first SOC in 1977 in an attempt to unify agencies' independent collection of occupational data. But after a 1980 revision, the original SOC system was not universally adopted. Many agencies collected occupational data using classification systems that differed from the SOC.

In 1993, the U.S. Bureau of Labor Statistics (BLS) hosted an international conference to create a new process for revising the SOC. The Office of Management and Budget, part of the Executive Office of the President, later asked Federal agencies with occupational classification systems different from the SOC to work together on SOC revisions. A SOC Committee was established with representatives from BLS, the Census Bureau, the Employment and Training Administration, and several other agencies.

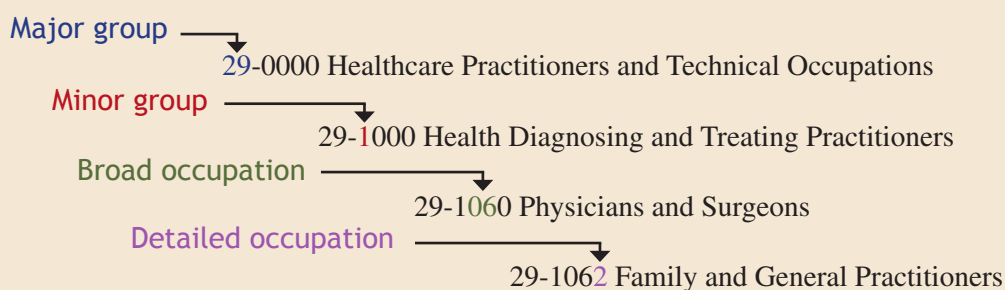


Understanding the Standard Occupational Classification (SOC) structure

The recently released 2010 SOC follows the same basic structure as the 2000 SOC. Occupations performed for pay or profit are organized by numeric code. These 6-digit codes designate their placement by major group, minor group, broad occupation, and detailed occupation. Detailed occupations group together workers with similar skills performing similar tasks.

The hyphen between each code's second and third digits is for presentation clarity only. The first two digits of the SOC code represent the major group, the third digit represents the minor group, the fourth and fifth digits represent the broad occupation, and the sixth digit represents the detailed occupation.

Example:



Over several years, a 1998 SOC was developed and included improvements to the original SOC classification system. The SOC Committee published this revision as the 2000 SOC, and that system has been the primary Federal occupational classification—until now.

Revision process

Although the 2010 SOC retains the 2000 SOC structure (see box, above), its revisions increase clarity, correct errors, and account for changes in technology and in the nature or organization of work in our economy.

The SOC Committee, now called the SOC Policy Committee and comprising representatives from nine Federal agencies, coordinated the revision of the 2000 SOC. Beginning in 2006, the Office of Management and Budget and the SOC Policy Committee published notices in the *Federal Register* to solicit public comment, questions, and suggestions for the 2010 SOC.

The notices resulted in hundreds of comments. Based on these comments, the SOC

Policy Committee proposed changes to codes, titles, and underlying classification principles for the 2010 SOC. The committee made a final recommendation to the Office of Management and Budget and completed the revision process in time for statistical agencies to start using the new system in 2010.

Revision results

The 2010 SOC revision process resulted in both major and minor changes to the 2000 SOC. The 821 detailed occupations in the 2000 SOC expanded to 840 in 2010—an increase that combines some occupations with others and adds new ones as well. Meanwhile, almost half of the detailed occupations in the 2010 SOC remain the same as in 2000. However, there were significant updates to information technology, healthcare, and human resource occupations.

Overall, the four kinds of revisions in the 2010 SOC are changes in editing, content, titles, and codes.

Editing changes. Most revisions in the 2010 SOC involve editing changes. Editing



changes include revisions to correct errors in the 2000 SOC, such as minor grammatical edits, but also involve improvements to definitions. Although even small changes can affect which workers are included in a particular occupation, most of the edits simply clarify definitions and incorporate advancements in technology and changes in work that occur over time.

In the 2000 SOC, for example, definitions for both the Motorboat Mechanics and the Bus and Truck Mechanics and Diesel Engine Specialists occupations mentioned diesel engines. Coders—the analysts responsible for assigning the numeric codes to individual workers—wondered where to put marine diesel engine specialists in the SOC. Mechanics for both diesel and nondiesel engines are included with Motorboat Mechanics. But a definitional edit to Bus and Truck Mechanics and Diesel Engine Specialists in the 2010 SOC specifies that this occupation includes mechanics working primarily with both automobile and marine diesel engines.

Other editing changes improve descriptions of the work performed. For example,

the brief definition for Nuclear Power Reactor Operators expanded between the 2000 SOC and the 2010 SOC, from 2000's "Control nuclear reactors" to 2010's "Operate or control nuclear reactors. Move control rods, start and stop equipment, monitor and adjust controls, and record data in logs. Implement emergency procedures when needed. May respond to abnormalities, determine cause, and recommend corrective action." The additional detail more accurately and completely describes the tasks performed by workers in the occupation.

Content changes. Content changes are revisions to the 2000 SOC that involve the addition or deletion of occupational titles. These changes divide one occupation in the 2000 SOC into two or more new occupations in the 2010 SOC, or they merge two or more occupations in the 2000 SOC into a single one in the 2010 SOC. Of the 60 content changes, most occurred in the Healthcare Practitioners and Technical Occupations group. (See table 1.)

It is not surprising that most content changes are in the Healthcare Practitioners

and Technical Occupations group, considering that one-third of the new occupations in the 2010 SOC are in this major group. The new occupations in this group are Exercise Physiologists, Genetic Counselors, Hearing Aid Specialists, Magnetic Resonance Imaging Technologists, Nurse Anesthetists, Nurse Midwives, Nurse Practitioners, and Ophthalmic Medical Technicians.

Title changes. More than 100 occupations had a title change from the 2000 SOC to the 2010 SOC. Often, title changes help to clarify which workers are in an occupation. In other cases, titles change to keep up with developments in technology or with shifting terminology.

An example of a title change to clarify workers in an occupation is the revision to

the 2000 SOC title of First-Line Supervisors/Managers, which covered all kinds of direct supervisors and managers. In the 2010 SOC, those titles are shortened to First-Line Supervisors to clarify that most managers belong in different occupations in the managerial group. Thus, the shorter titles in the 2010 SOC better clarify the difference between occupations such as First-Line Supervisors of Retail Sales Workers (a supervisory occupation) and Sales Managers (a managerial occupation).

A title change reflecting technological developments is Radio Mechanics from the 2000 SOC, which became Radio, Cellular, and Tower Equipment Installers and Repairers in the 2010 SOC. The expansion of this title acknowledges advances in technology systems, such as cellular communications and

Table 1
Content changes to the 2010 Standard Occupational Classification (SOC) system, by content changes to occupational group

Intermediate group title and major groups included	Number of content changes
Healthcare Practitioners and Technical Occupations (29)	13
Education, Legal, Community Service, Arts, and Media Occupations (21-27)	10
Management, Business, and Financial Occupations (11-13)	9
Service Occupations (31-39)	8
Computer, Engineering, and Science Occupations (15-19)	6
Production Occupations (51)	5
Construction and Extraction Occupations (47)	4
Installation, Maintenance, and Repair Occupations (49)	3
Office and Administrative Support Occupations (43)	2
Sales and Related Occupations (41)	1
Farming, Fishing, and Forestry Occupations (45)	0
Transportation and Material Moving Occupations (53)	0
Military Specific Occupations (55)	0

mobile broadband, that have emerged in the past decade.

An example of a title change to keep up with shifting terminology is Career/Technical Education Teachers. This 2010 SOC title replaces the dated title of Vocational Education Teachers from the 2000 SOC.

Code changes. As mentioned previously, each occupation in the SOC has a 6-digit code that designates its placement within the SOC structure. Comparing the

2010 SOC with the 2000 SOC, 60 detailed occupations changed codes—including 9 that moved into a different major group of closely related occupations. (See table 2.) These code changes demonstrate the SOC Policy Committee’s analysis of the types of skills needed to perform the work.

For example, Flight Attendants were classified in the 2000 SOC with Personal Care and Service Occupations. But their code change in the 2010 SOC, to Transportation

Table 2
Occupations shifting major groups between the 2000 and 2010
Standard Occupational Classification (SOC) systems

2000 SOC occupation and code	2010 SOC occupation and code
Emergency Management Specialists (13-1061)	Emergency Management Directors (11-9161)
Farm Labor Contractors (45-1012)	Farm Labor Contractors (13-1074)
Sales and Related Workers, All Other (41-9099)	Fundraisers (13-1131)
Business Operations Specialists all other (13-1199)	Market Research Analysts and Marketing Specialists (13-1161)
Market Research Analysts (19-3021)	
Public Relations Specialists (27-3031)	
Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation (13-1041)	Transportation Security Screeners (33-9093)
Security Guards (33-9032)	
Protective Service Workers, All Other (33-9099)	
Funeral Directors (11-9061)	Morticians, Undertakers, and Funeral Directors (39-4031)
Construction and Related Workers, All Other (47-4099)	Solar Photovoltaic Installers (47-2231)
Roofers (47-2181)	
Electricians (47-2111)	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)	
Installation, Maintenance, and Repair Workers, All Other (49-9099)	
Flight Attendants (39-6031)	Flight Attendants (53-2031)
Transportation Attendants, Except Flight Attendants and Baggage Porters (39-6032)	Transportation Attendants, Except Flight Attendants (53-6061)

and Material Moving Occupations, reflects that their work aligns more closely with that performed by other air transportation workers.

Codes also changed for detailed occupations that were pulled out from a broad occupational grouping. For example, in the 2000 SOC, Training and Development Specialists were included in the broad occupational grouping of Human Resources, Training, and Labor Relations Specialists. But in the 2010 SOC, Training and Development Specialists have their own broad occupation of Training and Development Specialists. This code change addresses coders' confusion about how to classify a Training and Development Specialist who may not work directly in the human resources department—such as an instructor for a company that provides computer software training. In the 2010 SOC, these workers more clearly fall under Training and Development Specialists.

Next steps and more information

The SOC, like other statistical classification systems, must be updated periodically to increase accuracy in collecting and reporting

data. If classification systems are revised too often, quality might suffer because the data lose comparability. But, especially with occupational data, the need for revision is crucial for keeping pace with the rapidly changing workforce.

Balancing the need for continuity against the importance of staying current, the Office of Management and Budget and the SOC Policy Committee expect that the next revision of the SOC will begin in 2013 for publication in 2018. BLS will share details as they become available on how to submit suggestions for changes to the 2010 SOC.

All SOC definitions are available online from the SOC section of the BLS Web site, www.bls.gov/soc/soc_2010_definitions.pdf.

For a complete list of the types of changes made to the 840 occupations in the 2010 SOC, see www.bls.gov/soc/home.htm#materials.

For more information about the 2010 SOC, comparisons between the 2000 and 2010 systems, and plans for switching to the 2010 system, visit www.bls.gov/soc, call (202) 691-6500, or email soc@bls.gov. 