Updating the O*NET-SOC Taxonomy

Summary and Implementation

Prepared for

U.S. Department of Labor
Employment and Training Administration
Office of Workforce Investment
Skill Assessment Team
Washington, DC

Submitted by

The National Center for O*NET Development
March, 2006

Table of Contents

Executive Summary

The revision of the O*NET-SOC occupational taxonomy (Occupational Information Network-Standard Occupational Classification) is part of the O*NET Program's continuous improvement effort. One of the main goals of the revision to the taxonomy was to ensure that as O*NET data collection proceeds, data will be collected at the appropriate level of specificity, balancing the needs of cost efficiency, sampling precision, data quality, and product utility. In addition, the taxonomy needs to reflect changes occurring in the world of work as a result of new technologies, innovative business practices, and the organization of work. This document provides a summary of the taxonomy revision process and describes the implementation of the first changes made resulting from it. The current O*NET-SOC taxonomy (O*NET-SOC 2000) is to be updated with a revised O*NET-SOC taxonomy (O*NET-SOC 2006).

The revised O*NET-SOC 2006 taxonomy, outlined here, will include 949 occupational titles, 812 of which represent O*NET data-level occupations. Data-level occupations are those occupations for which the O*NET Program collects data. Data and occupational information are collected on a wide variety of variables and scales, such as occupational characteristics and worker requirements drawn from the O*NET Content Model (http://www.onetcenter.org/content.html). Data are gathered from job incumbents and occupation experts for domains such as knowledges, work activities, work context, tasks, and educational requirements. Additionally, trained occupational analysts, following standardized procedures, independently conduct an analysis of occupational information provided by job incumbents to develop occupational ability and skills information. The previous O*NET-SOC 2000 taxonomy contained 1167 occupational titles, 960 of which represented O*NET data-level occupations.

The revised taxonomy has an increased correspondence with the Standard Occupational Classification (SOC). In addition, work is underway to identify and develop occupational information for new and emerging (N&E) occupations within high-growth industries.

The scheduled June 2006 release of the O*NET 10.0 database will represent the ninth release of the O*NET Database since its initial release in 1998, but only the second broad change to the taxonomy. The first broad change was the conversion from an Occupational Employment Statistics-based (OES-based) classification, O*NET OU 1998, to a SOC-based classification, O*NET-SOC 2000. Additional changes to the taxonomy are planned for the future, when new and emerging occupations are added.

The implementation of the revisions to the taxonomy will occur in two phases. The June 2006 scheduled release of the O*NET 10.0 database will incorporate the revisions to the taxonomy (O*NET-SOC 2006) described in this paper. In the future, another revision is planned to include new and emerging occupations from high-growth industries that have been selected and added to the taxonomy.

As a result of the revisions, the O*NET database and O*NET products are better able to meet the needs of customers. Customers will be able to move more easily between the O*NET system and other SOC-based data resources, and will gain access to occupational information for new and emerging occupations.

The O*NET system was designed to adapt to changes in the world of work. With the continued identification of new and emerging occupations, the correspondence between the O*NET system and the world of work promises to grow even stronger while meeting the immediate demand for more extensive occupational information within the rapidly changing high-growth industries.

Introduction

The revision of the O*NET-SOC occupational taxonomy (Occupational Information Network-Standard Occupational Classification) is part of the O*NET Program's continuous improvement effort. The O*NET-SOC is based on the Standard Occupational Classification [(SOC); Office of Management and Budget, 2000]. In some cases, the O*NET-SOC describes occupations at a more detailed level than does the SOC, to reflect needed occupational specificity.

One of the main goals of the revision to the taxonomy was to ensure that as O*NET data collection proceeds, data will be collected at an appropriate level of specificity. There is a need to balance several factors: 1) cost efficiency, 2) sampling precision, 3) data quality, and 4) product utility. In addition, the taxonomy needs to reflect changes that are occurring in the world of work as a result of new technologies, innovative business practices, and the organization of work. As a consequence, the revised taxonomy has an increased correspondence with the SOC, and work is underway to identify and develop occupational information for new and emerging (N&E) occupations within high-growth industries.

This document provides a summary of the taxonomy revision process and describes the implementation of the first changes. The current taxonomy (O*NET-SOC 2000) is being updated with a revised taxonomy (O*NET-SOC 2006). Additional changes to the taxonomy are planned for the future, when N&E occupations are added.

The revision of the O*NET-SOC is progressing in two phases. In the first phase, the detailed O*NET-SOC occupations were reviewed to identify any overlap, redundancy, or gaps in the way they represent the SOC occupations to which they are linked. In the second phase, N&E occupations from within the high-growth industry sectors, described by the President's High Growth Job Training Initiative administered by the Department of Labor's Employment and Training Administration [(DOL/ETA) http://www.doleta.gov/BRG/JobTrainInitiative/], will be identified and added to the taxonomy.

Phase I of the revision process is complete. The result is the O*NET-SOC 2006 taxonomy, an updated SOC-based classification with increased correspondence between the O*NET-SOC and the 2000 SOC where possible. Phase II of the revision process is underway. For a detailed description of the N&E occupation project, refer to the New and Emerging (N&E) Occupations Methodology Development Report (National Center for O*NET Development, 2006).

As a result of the revisions to the O*NET-SOC taxonomy, the O*NET database and O*NET products are better able to meet the needs of customers. Customers will be able to move more easily between the O*NET system and other SOC-based data sources, and will gain access to occupational information for N&E occupations.

As a frame of reference, the next section provides more detail about the O*NET-SOC 2000 taxonomy to enable comparison to the revision and the implementation of the O*NET-SOC 2006 taxonomy.

O*NET-SOC 2000 Taxonomy

The current O*NET taxonomy, O*NET-SOC 2000, represents the transition from the former Occupational Units (OUs) of O*NET 98 to the SOC (Levine, Nottingham, Paige & Lewis, 2000). The Office of Management and Budget (OMB) mandates that all government agencies collect occupation related information via a classification compatible with the SOC. From a customer perspective, this allows users to move from various information systems or data products with greater ease, while also facilitating the integration of different types of information within systems.

The structure of the SOC system includes four levels of aggregation (i.e., 23 major groups, 96 minor groups, 449 broad occupations and 821 detailed occupations). All SOC occupations are assigned a six-digit code. The first and second digits 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. The 23 major groups of the SOC include:

- 11-0000 Management Occupations
- 13-0000 Business and Financial Operations Occupations
- 15-0000 Computer and Mathematical Occupations
- 17-0000 Architecture and Engineering Occupations
- 19-0000 Life, Physical, and Social Science Occupations
- 21-0000 Community and Social Services Occupations
- 23-0000 Legal Occupations
- 25-0000 Education, Training, and Library Occupations
- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
- 29-0000 Healthcare Practitioners and Technical Occupations
- 31-0000 Healthcare Support Occupations
- 33-0000 Protective Service Occupations
- 35-0000 Food Preparation and Serving Related Occupations
- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 45-0000 Farming, Fishing, and Forestry Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations
- 55-0000 Military Specific Occupations

SOC minor groups, broad occupations and detailed occupations are assigned codes related to the corresponding major groups. For example:

  19-0000 Life, Physical, and Social Science Occupations (SOC major group)
     19-4000 Life, Physical and Social Science Technicians (SOC minor group)
       19-4050 Nuclear Technicians (SOC broad occupation)
         19-4051 Nuclear Technicians (SOC detailed occupation)

In the O*NET-SOC taxonomy, an occupation that is directly adopted from the SOC system is assigned the six-digit SOC code, along with a .00 extension. If directly adopted from the SOC, the SOC title and definition are also used. Hereafter, these are referred to as SOC-level occupations.

 If the O*NET-SOC occupation is more detailed than the original SOC detailed occupation, it is assigned the six-digit SOC code from which it originated, along with a two-digit extension starting with .01, then .02, .03 etc., depending on the number of detailed O*NET-SOC occupations linked to the particular SOC detailed occupation.

For example, Nuclear Technicians is a SOC detailed occupation to which two detailed O*NET-SOC occupations are linked. See the occupational codes and titles for this example below.

  19-4051.00 Nuclear Technicians (SOC-level)
     19-4051.01 Nuclear Equipment Operation Technicians (detailed O*NET-SOC occupation)
     19-4051.02 Nuclear Monitoring Technicians (detailed O*NET-SOC occupation)
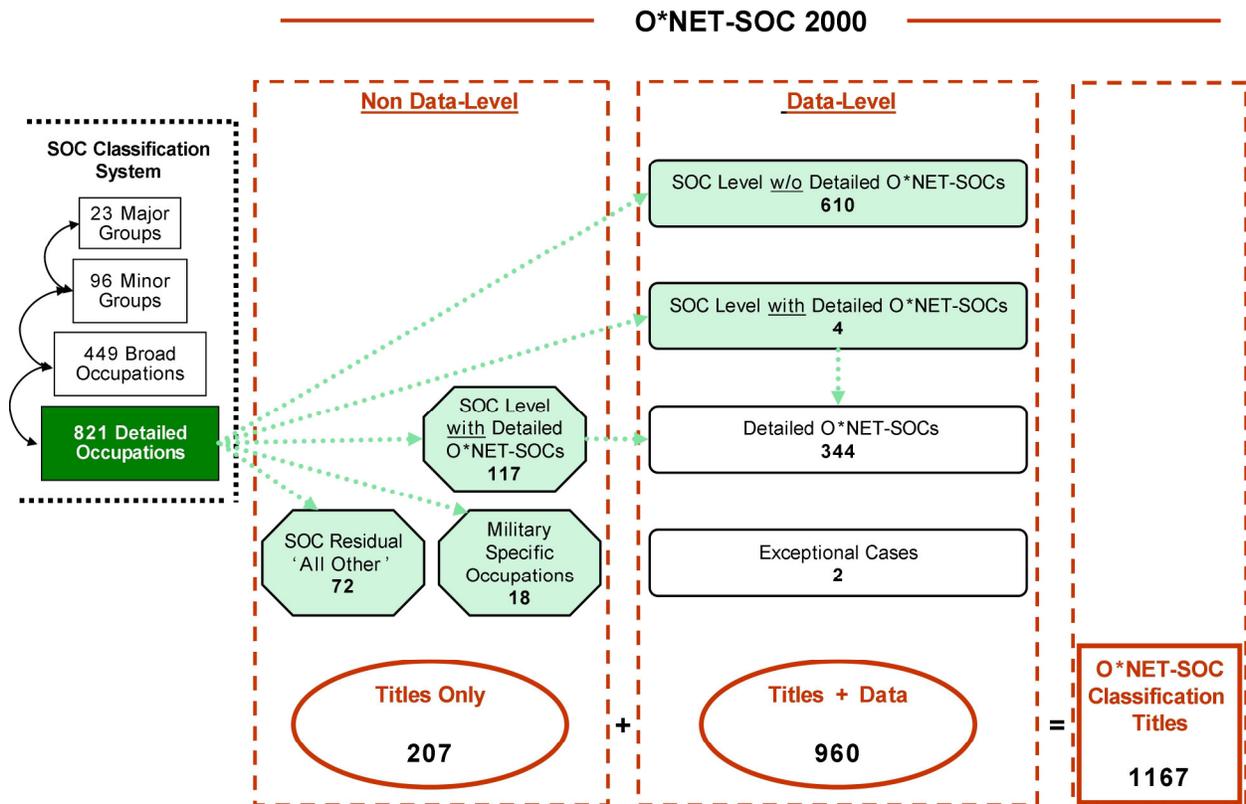
Both 19-4051.01 Nuclear Equipment Operation Technicians and 19-4051.02 Nuclear Monitoring Technicians are data-level occupations in the taxonomy. O*NET data-level occupations are those occupations for which the O*NET Program collects data. Data and occupational information are collected on a wide variety of variables and scales, such as occupational characteristics and worker requirements drawn from the O*NET Content Model (http://www.onetcenter.org/content.html). O*NET data are gathered from job incumbents and occupation experts for domains such as knowledges, work activities, work context, tasks, and educational requirements. Additionally, trained occupational analysts, following standardized procedures, independently conduct an analysis of occupational information provided by job incumbents to develop occupational ability and skills information.

Again, in the example above, the two detailed O*NET-SOC occupations, 19-4051.01 Nuclear Equipment Operation Technicians and 19-4051.02 Nuclear Monitoring Technicians, are data-level occupations. On the other hand, 19-4051.00 Nuclear Technicians is not an O*NET data-level occupation.

As shown in Figure 1, all 821 SOC detailed occupations are represented in some form in the O*NET-SOC taxonomy. The O*NET-SOC 2000 taxonomy contains 1167 occupational titles,

960 of which represent data-level occupations. Of the 960 data-level occupations, 610 are SOC level occupations adapted directly from the SOC, 4 are SOC level occupations adapted directly from the SOC and linked to more detailed O*NET-SOC occupations, 344 are detailed O*NET-SOC occupations, and 2 occupations are at an exceptional level. The remaining 207 occupational titles include 18 military occupational titles, 72 "All Other" occupational titles, and 117 SOC detailed occupations to which more detailed O*NET-SOC occupations are linked.

Figure 1. Summary of the O*NET-SOC 2000 Taxonomy

Need for a Revision to the O*NET-SOC 2000 Taxonomy

A major goal of revising the taxonomy is to ensure that O*NET data will be collected at the appropriate level of specificity, balancing the needs of cost efficiency, sampling precision, data quality, and product utility as data collection proceeds. The taxonomy needs to reflect changes occurring in the world of work, resulting from changes in technologies, business practices, and the organization of work. The revised taxonomy has an increased correspondence with the SOC, and work is underway to identify and develop occupational information for N&E occupations within high-growth industries. These efforts are described in greater detail below.

Increase Correspondence with the SOC

The survey process used by the O*NET Program to collect and update information relies heavily on occupation-by-industry estimates (U.S. Department of Labor Employment and Training Administration, 2005). These estimates are generated by the Occupational Employment Statistics (OES) survey conducted by a federal-state partnership between state workforce agencies and the Bureau of Labor Statistics (BLS). The O*NET data collection process for each occupation involves finding job incumbents employed in a particular, or "target," occupation. Job incumbents must be selected from a representative sample of businesses that are likely to employ the target occupation. BLS industry information linked to both occupations and to industry categories is critical for selecting businesses within industry categories that are "eligible," or likely to employ the target occupation. Additionally, this information is necessary for generating the estimates of how many employees within the target occupation are employed at a given business.

These industry estimates are not readily available for the detailed O*NET-SOC occupations. Instead, information for the SOC-level occupation must be extrapolated and then rationally reviewed by occupation experts for the detailed O*NET-SOC occupations. This process proves to be both labor-intensive and inefficient, because detailed O*NET-SOC occupations experience lower eligibility rates and a higher number of incumbent-occupation mismatches compared to SOC-level occupations.

Increasing the correspondence with the SOC has led to increased O*NET data collection efficiencies, data accuracy, and cost savings. In addition, it allows greater ease of movement for O*NET customers among all SOC-based data sources. For example, career exploration tools can be developed using the O*NET database, O*NET products, and SOC-based labor market information. For such tools, an increased correspondence with the SOC improves the comparability of labor market information to O*NET-SOC occupations.

Nevertheless, the O*NET-SOC taxonomy needs to maintain the occupational unit of analysis at a level where meaningful differences between occupations exist. An extensive review was conducted to ensure that occupational specificity was maintained where warranted.

Identify New and Emerging (N&E) Occupations

The O*NET system is designed to have the capacity to reflect on-going developments in workforce needs. It is responsive to current developments in technology, social organization, business practices, and government regulations. Incorporating N&E occupations into the O*NET system in a timely manner is important for meeting the needs of the many users in both the public and private sectors.

More extensive occupational information is needed to serve workforce investment activities in the high-growth industry sectors described by the President's High Growth Job Training Initiative administered by the Department of Labor's Employment Training Administration (DOL/ETA; http://www.doleta.gov/BRG/JobTrainInitiative/).

Identification of N&E occupations from within the high-growth, in-demand industries will lead to an O*NET database and O*NET products that will better meet the needs of many customers, as well as more accurately reflect the current world of work. Individuals seeking new careers or new pathways within existing careers will benefit from the identification of N&E occupations. Other beneficiaries include educational institutions developing training programs to meet workforce demands, and companies writing job descriptions for workers in a changing environment.

Objectives of the Revision

In summary, by revising the O*NET-SOC as described above, several objectives are achieved:

- The sampling of occupations in the O*NET Program is more efficient and more precise due to direct use of SOC-based occupation employment statistics produced by the U.S. Bureau of Labor Statistics and the states.

- O*NET data have an increased correspondence with employment projections and other labor market information used in career exploration and other applications.

- The O*NET-SOC taxonomy and database meet the demand for more extensive occupational information for workforce investment activities within rapidly changing high-growth industries.

- Finally, in a rapidly changing economy, the revised classification more accurately reflects the many occupations found in today's world of work, including N&E occupations.

The next section describes more fully the changes to the taxonomy and how these changes contribute to achieving the objectives.

O*NET-SOC 2006 Taxonomy

As previously discussed, the objective of the first phase of the revision to the taxonomy was to ensure that as O*NET data collection proceeds, data will be collected at the appropriate level of specificity, balancing the needs of cost efficiency, sampling precision, data quality, and product utility. Several general types of changes to the taxonomy were possible as a result of this review. Some occupations were added to the taxonomy. Some occupations were aggregated, meaning that occupations were joined together to form a less specific occupation. Other occupations were subsumed, meaning that it was determined that the occupation was too specific or was redundant with an existing occupation in the taxonomy. In other words, a subsumed occupation is associated with an existing occupation, but does not have any altering effect on the existing occupation's definition, task list, or other occupational data. The subsumed occupation's title becomes a lay or alternate title for the existing occupation.

A detailed review of O*NET-SOC occupations was conducted (an analysis of available occupational information, including definitions, tasks, generalized work activities, knowledge, skills, abilities, and alternate/lay titles) to determine the appropriate level of occupational specificity.

A total of 233 of the current (O*NET-SOC 2000) detailed O*NET-SOC occupations were aggregated or subsumed and 15 detailed O*NET-SOC occupations were added to the taxonomy. As a result of these changes, the O*NET-SOC 2006 taxonomy includes 949 occupational titles.

Table 1 provides an overview of the transition from the O*NET-SOC 2000 taxonomy to the revised O*NET-SOC 2006 taxonomy.

Table 1. Summary of O*NET-SOC 2000 and the O*NET-SOC 2006 Taxonomies

Type of Occupational Title	O*NET-SOC 2000	O*NET-SOC 2006
SOC-Level	821	821
Exceptional Cases*	2	2
Detailed O*NET-SOC Level	344**	126***
Total	1167	949

  * Two generalist occupations that correspond with higher level SOC occupations are included in the taxonomy. These exceptional cases are 11-3040.00 Human Resource Managers and 19-1020.01 Biologists.
  ** These 344 occupations are linked to 121 SOC-level occupations.
 *** These 126 occupations are linked to 50 SOC-level occupations

Five specific types of change to the taxonomy resulted from this review:

Type 1. Detailed O*NET-SOC occupations were aggregated to the SOC-level occupation.
Type 2. Two or more detailed O*NET-SOC occupations were aggregated into a new detailed O*NET-SOC occupation.
Type 3. Detailed O*NET-SOC occupations were subsumed by an existing detailed O*NET-SOC occupation.
Type 4. Detailed O*NET-SOC occupations were subsumed by a SOC-level occupation.
Type 5. Detailed O*NET-SOC occupations were added to the taxonomy.

Type 1 represents the most frequently occurring change, where existing detailed O*NET-SOC occupations were aggregated to SOC-level occupations. For example, because the difference was primarily one of context, 11-1011.01 Government Service Executives and 11-1011.02 Private Sector Executives were aggregated to the SOC-level occupation 11-1011.00 Chief Executives. In total, 195 detailed O*NET-SOC occupations were aggregated to 71 SOC-level occupations.

Similarly, in Type 2 changes, two or more detailed O*NET-SOC occupations were aggregated into a new detailed O*NET-SOC occupation where differences were minimal. For example, 51-4121.04 Solderers and 51-4121.05 Brazers were aggregated to form a new O*NET–SOC occupation: 51-4121.07 Solderers and Brazers. A total of 20 detailed O*NET-SOC occupations were aggregated to form 9 new detailed O*NET-SOC occupations.

In Types 3 and 4, a few cases were identified in which a single detailed O*NET-SOC occupation was subsumed by either a SOC-level occupation or an existing detailed O*NET-SOC occupation. For example, the detailed O*NET-SOC occupation Pipelaying Fitters was subsumed by the SOC-level occupation Pipelayers, since the work activities of Pipelayers and Pipelaying Fitters are very similar. Seven detailed O*NET-SOC occupations were subsumed by existing SOC-level occupations and 11 detailed O*NET-SOC occupations were subsumed by existing detailed O*NET-SOC occupations.

In Type 5 changes, a special review was conducted, with information technology and transportation security screening as a focus, to determine whether additional detailed occupations were needed in the O*NET-SOC taxonomy. Six new detailed O*NET-SOC occupations were added to the taxonomy as a result. These six occupations are:

- Software Quality Assurance Engineers and Testers
- Computer Systems Engineers/Architects
- Network Designers
- Web Developers
- Web Administrators
- Transportation Security Screeners

Table 2 provides a summary of each type of change to the taxonomy.

Table 2. Summary of Classification Changes from the O*NET-SOC 2000 to O*NET-SOC 2006*

Type of Change	Aggregated or Subsumed	Added
Type 1. Detailed O*NET-SOC occupations aggregated to the SOC-level occupation.	195	
Type 2. Two or more detailed O*NET-SOC occupations aggregated into a new detailed O*NET-SOC occupation.	20	9
Type 3. Detailed O*NET-SOC occupations subsumed by an existing detailed O*NET-SOC occupation.	11	
Type 4. Detailed O*NET-SOC occupations subsumed by a SOC-level occupation.	7	
Type 5. Detailed O*NET-SOC occupations added to the taxonomy.		6
Total Number of Occupations Aggregated or Subsumed**	233	
Total Number of Occupations Added		15

  * The O*NET-SOC 2000 taxonomy includes a total of 1167 occupational titles of which 960 represent data-level occupations. The O*NET-SOC 2006 taxonomy includes a total number of 949 occupational titles of which 812 represent data-level occupations.
** 934 occupational titles were unaffected by the aggregation of occupations. Among these 934 are the 18 military occupational titles and the 72 "All Other" occupational titles. A few of the remaining occupations received minor revisions to titles or definitions.
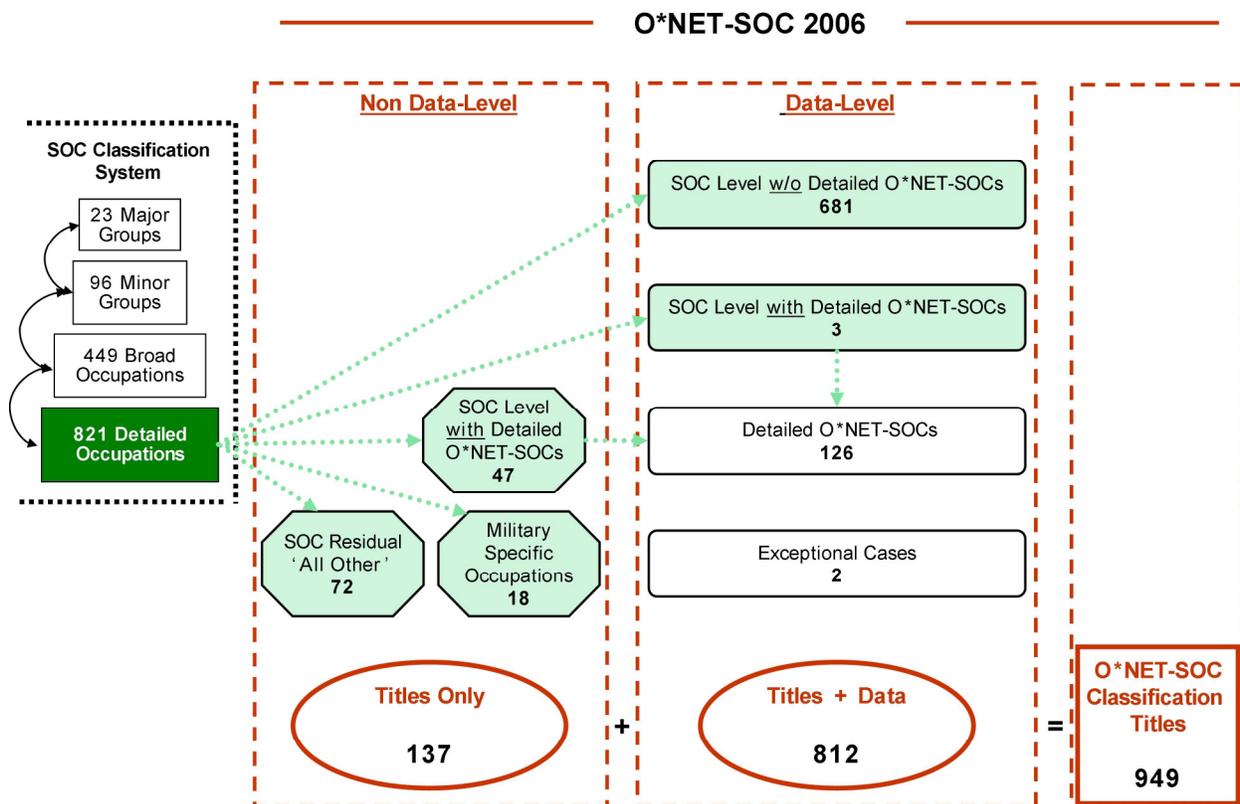
Finally, other minor improvements to the taxonomy were made, including a few changes to detailed O*NET-SOC occupation definitions or titles. For example, the title of the occupation 45-1011.06 First-Line Supervisors and Manager/Supervisors - Fishery Workers was changed to First-Line Supervisors/Managers of Aquacultural Workers. There are two reasons for this change. First, "fishery" was replaced with "aquacultural" to be more consistent with the SOC occupation to which it is linked, and to better represent the language currently used in this industry. Second, the format of the title was changed to be more consistent with title format of the SOC occupation to which it is linked. The description of this occupation was also modified to replace "fishery" with "aquaculture."

See Appendix A for detailed listings of occupations included within each type of change. The next section describes the impact of these changes on O*NET data collection.

O*NET Data Collection

As shown in Figure 2, the O*NET-SOC 2006 taxonomy contains 949 occupational titles, 812 of which represent data-level occupations. Of the 812 data-level occupations, 681 are SOC level occupations adapted directly from the SOC, 3 are SOC level occupations adapted directly from the SOC and linked to more detailed O*NET-SOC occupations, 126 are detailed O*NET-SOC occupations, and 2 occupations are exceptional cases. The remaining 137 occupational titles include 18 military occupational titles, 72 "All Other" occupational titles, and 47 SOC detailed occupations to which more detailed O*NET-SOC occupations are linked.

Figure 2. Summary of the O*NET-SOC 2006 Taxonomy

The O*NET Program is collecting and disseminating updated data for 812 of the 949 occupational titles contained within the O*NET-SOC 2006 taxonomy. The majority of these occupations are SOC-level occupations (i.e., 684 SOC-level occupations compared to 126 detailed O*NET-SOC occupations), while two occupations, 11-3040.00 Human Resource Managers and 19-1020.01 Biologists, are exceptional cases.

Data are collected at either the SOC level or the detailed O*NET-SOC level, with the exception of three cases, Network and Computer Systems Administrators (15-1071.00), Child Care Workers (39-3011.00), and Social Science Research Assistants (19-4061.00), for which data are collected at both the SOC-level and at the detailed O*NET-SOC occupation level.

In addition, the Legislators (11-1031.00) and Mathematical Technicians (15-2091.00) are included in the 812 occupations with data. However, these two occupations are not slated to have their O*NET Legacy Analyst data updated with Incumbent or Occupation Expert (OE) data. Legislators, while listed as an occupational classification in the SOC, is a high level elected office in state and federal government. Collecting new data for this occupation would provide little value-added information to users of O*NET data, such as job seekers. Mathematical Technicians, as defined in the SOC, could not be found in sufficient numbers to support data collection. Further research indicated that this occupation has undergone dramatic change due to impact of information technology. Much of the analysis formerly done by Mathematical Technicians is now done by the engineers and life, physical, and social scientists and associated technicians themselves, using data analysis software. The remaining few job incumbents who once specialized in mathematical analysis and were classified as Mathematical Technicians, may now more appropriately be classified under 15-1099 Computer Specialists, All Other.

See Appendix B for a detailed listing of the O*NET-SOC 2006 occupations included in the data collection plan.

The next section provides historical information about the O*NET-SOC taxonomy and previous database releases.

The O*NET Taxonomy and O*NET Database Releases

The June 2006 release of the O*NET 10.0 database represents the ninth release of the O*NET database since its initial release in 1998. However, the O*NET-SOC 2006 taxonomy represents only the second broad change to the taxonomy. The initial O*NET 98 release was based on the occupational classification used by the BLS Occupational Employment Statistics (OES) program at that time. The OES program has since moved to a SOC basis also. This OES-based O*NET 98 taxonomy was developed and released prior to the update of the SOC.

The O*NET taxonomy underwent its first broad change with the publication of the 2000 SOC by converting to a SOC-based taxonomy following the mandate of the Office of Management and Budget. This occurred with the O*NET 3.0 database release, which was the first on a SOC basis.

Table 3 provides an overview of the correspondence of the O*NET database releases and the O*NET taxonomy.

Table 3. O*NET Database Releases and the O*NET Taxonomy

Database Release	Release Date	O*NET Taxonomy
O*NET 98	October, 1998	O*NET OU 1998 (OES-based)
O*NET 3.0	August, 2000	
O*NET 3.1	June, 2001	
O*NET 4.0	June, 2002	
O*NET 5.0	April, 2003	
O*NET 5.1	November, 2003	O*NET-SOC 2000 (SOC-based)
O*NET 6.0*	July, 2004	
O*NET 7.0	December, 2004	
O*NET 8.0	June, 2005	
O*NET 9.0	December, 2005	
O*NET 10.0	June, 2006	O*NET-SOC 2006 (SOC-based)

* A single O*NET-SOC occupation was added to the O*NET-SOC 2000 taxonomy (i.e., 39-9011.01 Nannies).

The revisions to the taxonomy described in this document are planned in two phases. The next section describes the implementation plan.

Implementation of Revisions to the O*NET-SOC Taxonomy

Recent data collection has progressed based on the O*NET-SOC 2006 taxonomy. As data collection was implemented, occupations that were one-to-one with the SOC system received highest priority for inclusion in O*NET sample waves, while the revision to the taxonomy continued to be fine-tuned. Now, as we approach the completion of many affected occupations in data collection, the time has come to publicly implement those changes to the classification system. The implementation of the revisions to the taxonomy will occur in two phases.

Phase I

The June 2006 scheduled release of the O*NET 10.0 database will incorporate the revisions to the taxonomy (O*NET-SOC 2006) described in this paper. This includes implementing the identified occupational aggregations, subsumed occupations, and additions, along with a few other changes not affecting the structure of the classification (i.e., occupation definition and title revisions). Many of the occupations affected by aggregations will be populated with new, updated data at the time of the O*NET 10.0 database release. However, for a small subset of occupations, this phase will include revising Legacy Analyst data until they are updated with job incumbent/occupation expert data (see Appendix C for a listing of the occupations that will be populated with revised Legacy Analyst data at the time of the O*NET 10.0 database release).

In addition to updating the core O*NET database, the implementation will also include updating information within the O*NET supplemental database files to reflect the revised classification (e.g., crosswalk files, lay titles file, detailed work activities file, etc.).

Phase II

Work on identifying N&E occupations is currently underway. In the future, further revision to the taxonomy will occur when the N&E occupations from high-growth industries have been identified. At that time, the N&E occupations identified from the President's High Growth Job Training Initiative will be coded and incorporated within the taxonomy. The Phase II revisions, incorporating N&E occupations, will be released prior to the publication of occupational data for those occupations.

Conclusion

In summary, the revisions to the O*NET-SOC taxonomy offer many improvements to users of the system:

- The changes have increased the efficiency of the data collection effort through use of SOC-based occupation employment statistics from the BLS.

- The correspondence between the O*NET-SOC and labor market information has improved where possible, while the additional level of detail offered for some O*NET-SOC occupations has been maintained, where necessary.

- Efforts to identify N&E occupations are underway. These occupations will be included in data collection and future publications in order to meet the demand for more extensive occupational information within the rapidly changing high-growth industries.

The O*NET system was designed to adapt to changes in the world of work. This update of the O*NET-SOC taxonomy demonstrates the adaptability of the O*NET system, as it now more accurately reflects the occupations found in the United States. With the continued identification of N&E occupations, the correspondence between the O*NET system and the world of work promises to grow even stronger.

References

Levine, J., Nottingham, J., Paige, B. & Lewis, P. (May, 2000*). Transitioning O*NET to the Standard Occupational Classification.* National Center for O*NET Development.

National Center for O*NET Development. (1998; revised 2002). *Appendix D: The Development of the Occupational Information (O*NET) Analyst Database.*

National Center for O*NET Development (2006). *New and Emerging (N&E) Occupations Methodology Development Report.*

Occupational Employment Statistics (OES). http://www.bls.gov/oes/home.htm

Office of Management and Budget. (2000). *Standard Occupational Classification (SOC) System.*

U.S. Department of Labor Employment and Training Administration. (2005). *O*NET Data Collection Program: Office of Management and Budget Clearance Package Supporting Statement.*