SKILLTRAN DATA RESOURCES

Vocational reports from SKILLTRAN integrate data drawn from a variety of government and private resources. SKILLTRAN's primary source of information is the United States Department of Labor (DOL). The DOL conducts job analyses, incumbent surveys, and periodically compiles and publishes its findings about occupations commonly found in the economy. From 1939 until the 1990s, these findings were published in the Dictionary of Occupational Titles (**DOT**). All SKILLTRAN services and products are based on the Dictionary of Occupational Titles, Fourth Edition, Revised 1991 and characteristics of these occupations released in May, 1992 and periodically updated by the DOL through 1998. DOL has discontinued its updating of DOT-based occupations in favor of its new, less comprehensive O*NET system (Occupational Network) of occupational classification largely based on incumbent surveys rather than on-site job analyses by trained job analysts. Data collection and initial validation of its O*NET occupational categories will continue through the year 2008. More information about O*NET is available at www.onetcenter.org. DOL cautions that O*NET information is not intended for forensic purposes.

This document summarizes core concepts, the primary data resources that are interwoven among various SKILLTRAN products, and answers to questions frequently asked by SKILLTRAN customers.

DEFINITION AND CONCEPTUAL FOUNDATION FOR TRANSFERABLE SKILLS

The SKILLTRAN transferability process was first defined in 1981 by a SKILLTRAN predecessor company. (See the Company History section for more details.) The process has it roots in the methods of sentence analysis used by the Department of Labor to build the job descriptions in the DOT (see the RHAJ section below). This technique describes the job-worker situation in a very standardized format. The format includes the worker function (what the worker does), the technologies, machines, tools, equipment and work aids used (how and why the worker does it), and the materials used, products produced, subject matter or services provided (what the worker works on or works with). Worker technologies are reflected in WORK field codes, particularly when combined with the SVP (Specific Vocational Preparation) needed to properly perform the activities of the WORK field. Materials, products, subject matter and services are embodied in MPSMS codes. Each DOT code has at least one (of 3 maximum) WORK field and MPSMS codes assigned.

The Social Security Administration (SSA) has a definition that is a national standard because it is defined in the *Code of Federal Regulations* [20 CFR 404.1568(d)]. SSA slightly revised this definition in the year 2000, but otherwise has set and followed this definition since 1980 as it adjudicates 1-2 million disability claims annually. SkillTRAN is unaware of any other federal definition of transferable skills.

(d)Skills that can be used in other work (transferability)
   (1) What we mean by transferable skills. We consider you to have skills that can be used in other jobs when the skilled or semi-skilled work activities you did in past work can be used to meet the requirements of skilled or semi-skilled work activities of other jobs or kinds of work. This depends largely on the similarity of occupationally significant work activities among different jobs.
   (2) How we determine skills that can be transferred to other jobs.
Transferability is most probable and meaningful among jobs in which -
     (i) The same or a lesser degree of skill is required;
     (ii) The same or similar tools and machines are used; and
     (iii) The same or similar raw materials, products, processes, or services are involved.
   (3) *Degrees of transferability.* There are degrees of transferability of skills ranging from very close similarities to remote and incidental similarities among jobs. A complete similarity of all three factors is not necessary for transferability. However, when skills are so specialized or have been acquired in such an isolated vocational setting (like many jobs in mining, agriculture, or fishing) that they are not readily usable in other industries, jobs, and work settings, we consider that they are not transferable.

The SKILLTRAN Process for Transferable Skills Analysis (TSA)

The SKILLTRAN transferability of skills analysis is rooted in this conceptually solid SSA definition of transferable skills. SKILLTRAN uses the following worker and occupational characteristic codes to fulfill the Code of Federal Regulations (CFR) definition of (d)2(i-iii) as follows:

> 2(i) Skill level is implied by the SVP for each WORK field of work history
> 2(ii) Work activities, tools and machines are key components of WORK fields
> 2(iii) Raw materials, products, processes, or services are reflected in MPSMS codes.

The SKILLTRAN analysis of transferable skills uses **WORK** field codes and **MPSMS** codes. In addition, the amount of training and/or experience (**SVP** - Specific Vocational Preparation typically required for each **WORK** field) is considered in the analysis. These codes are fully described in the *Revised Handbook for Analyzing Jobs*. SKILLTRAN TSA (and other occupational searches) do not exceed the residual post-injury worker profile characteristics for Strength, Physical Demands, Environmental Conditions, Aptitudes, SVP, GED-RML, and Temperaments. SKILLTRAN assumes no limitation in Strength, Physical Demands, Environmental Conditions or Temperaments unless specifically entered by the customer. The maximum levels of SVP, GED-RML, and aptitudes are used based on the demands of work history entered by the customer. The maximum SVP acquired for each WORK field travels with that WORK field in the TSA analysis.

SKILLTRAN implements its transferability analysis as follows:

Directly Transferable Occupations share at least one of the three digit **WORK** fields (with an SVP at or below the maximum level demonstrated from work history for that WORK field) known from each job of the past work history AND have at least one of the same three digit **MPSMS** codes from any of those jobs done in the past. Directly transferable occupations have primary job duties that are very similar to past work. Little or no learning of job duties is anticipated.

Closely Transferable Occupations are in combination **WORK** fields (with an SVP at or below the maximum level demonstrated from work history for that WORK field) AND have at least one of the same three digit **MPSMS** codes from past work history. Combination WORK fields involve multiple work technologies. Some learning of a few job duties may be anticipated.

Generally Transferable Occupations share at least one of the two digit **WORK** fields from the past work history (with an SVP at or below the maximum level demonstrated from work history for that WORK field) AND have at least one of the two digit **MPSMS** fields from the past. Two digit coding by **WORK** and **MPSMS** clusters occupations into generally related groups that may not share the same specific skills as developed in the past. Some learning of essential job duties is likely to be necessary.

Directly Related Occupations share at least one of the three digit **WORK** fields known from the past work history (with an SVP at or below the maximum level demonstrated from work history for that WORK field) but could involve *any* kind of **MPSMS**. Some moderate to significant on-the-job training can be anticipated. Formal training may be necessary for some occupations.

Generally Related Occupations share at least one of the two digit **WORK** fields known from the past work history (with an SVP at or below the maximum level demonstrated from work history for that WORK field) but could involve *any* kind of **MPSMS**. Significant on-the-job or formal training can be anticipated.

Unskilled Occupations (SVP = 1 or 2) can be learned within 30 days and require no previous occupational experience. There are a total of 3,125 unskilled occupations in the **DOT**.

BEST PRACTICES:

SKILLTRAN uses the maximum level of SVP associated with each WORK field from occupations depicted in work history. Per SSA definition Part (a), SKILLTRAN does not consider occupations with an SVP < 3 to be transferable. An SVP of 1 or 2 is considered to be an unskilled occupation, which falls outside the SSA definition of transferability. SKILLTRAN does commingle WORK and MPSMS fields, which often expands the range of identified occupational options. SKILLTRAN TSA searches assume that the worker is capable of all Physical Demand factors and capable of tolerating all Environmental Conditions and Temperament situations unless otherwise noted. Occupations are not found transferable if the GED-RML level or Aptitude levels are exceeded.

The SKILLTRAN **Placement Planning Service (PPS)** has the TSA and other types of searches available to further broaden the search for potential occupations. Users can explore other occupations that might share similar or new GOE Interest codes from past work history, Industry Codes, or other code systems. Many new occupations are suggested when using other code systems. However, these different search methods often introduce occupations with entirely new WORK and MPSMS fields. Therefore, while these occupations may indeed be possible to perform *with additional training*, they are often considered outside of the precise context of the SSA definition of transferability.

SKILLTRAN recommends beginning with Directly Transferable search options. If few or no occupations are found, **SEARCH AGAIN** and choose Generally Transferable, then Directly Related, etc. until the search produces enough occupations with which to work. All searches are done in a few seconds. **The report will reflect a summary of the results of each search, even if the user chooses not to include the list of selected titles in the report.** After any search, labor market information (long term occupational projections, wages, employment numbers, business listings for Labor Market Survey or Job Search), and real job openings are available from the new web-based server (https://online.skilltran.com). All occupations found in PPS or PREPOST searches are automatically transferred to this new server.

The SKILLTRAN **PREPOST** service (**Pre-Injury/Post-Injury Analysis**) performs 8 TSA searches simultaneously. No alternate search strategies are available in PREPOST. PREPOST occupations found are automatically transferred to the new web-based server for additional optional labor market information.

In both PREPOST and PPS, it is possible to "Compare the Worker Profile to an Intended Vocational Goal". This feature points out only the differences between the intended occupation's requirements and the worker's post-injury profile. It is useful to determine if an occupational idea is possible, within reasonable variance from the typical requirements, or perhaps could be modified through training or some kind of accommodation. It is also helpful to understand why a particular occupation was filtered out of a search list.

When making profile adjustments, use SKILLTRAN's *Pocket Guide to the DOT* (contact SKILLTRAN for a free copy) to understand the frequency distribution of worker characteristics in the DOT. Be wary of the precipitous drop when moving from frequent to occasional Reaching, Handling, or Near Acuity. Use SKILLTRAN's web-based Support Area for suggestions on handling of common case situations. After login to https://online.skilltran.com, click the Support hyperlink in the upper left corner.

Revised Handbook for Analyzing Jobs, 1991 - (RHAJ) - U.S. Department of Labor
The RHAJ is a government publication describing the methodology used for gathering and recording DOT and worker characteristic information. The RHAJ provides complete definitions for each of the worker characteristics of the DOT. DOL job analysts collected **DOT** data according to procedures specified in the 1991 Revised Handbook for Analyzing Jobs (**RHAJ**) published by the DOL. The 1991 **RHAJ** was the first officially released revision since the original publication of the Handbook for Analyzing Jobs in 1972. It contains complete explanations of all **DOT** factors, including elaborate and practical examples of the functional levels and rating procedures used by the job analysts. Practitioners are encouraged to consult the **RHAJ** often to properly interpret the many worker functions, traits and factors in any given case. SKILLTRAN has excerpted much of the RHAJ and made it available at
http://online.skilltran.com/rhaj/index.htm

Cross-Reference Codes The electronic formats used by SKILLTRAN include cross-references to various occupational code systems developed by other government entities. These code systems include:
- **CENSUS** Occupational Codes **(**Bureau of the Census)
- **SOC** - Standard Occupational Classification
- **OES** - Occupational Employment Survey
- **GOE** - Guide for Occupational Exploration
- **CIP** - Classification of Instructional Programs
- **NOC** - National Occupational Classification – Canada
- **O*NET** – The Occupational Network

Wage Data and Employment Numbers

SKILLTRAN reports government wage and employment data from several sources. In each SKILLTRAN report, there are hyperlinks to the source of the cited data. The most significant is data from the Occupational Employment Survey (**OES**). OES statistics are based on *survey responses by employers*. National long-range projections of occupational demand are also available for OES occupational groups. Current Population Survey (CPS) data is *based on household survey*. There are important differences in each set of data. Both OES and CPS statistics aggregate DOT occupations into broader occupational groups. The OES survey uses about 820 occupational groups, while the CPS data is grouped by slightly more than 500 CENSUS occupational groups.   This data aggregation has important implications for proper interpretation of wage and employment data in the context of a single DOT occupation. See the section below on Important Interpretation Notes.

OES - Occupational Employment Survey - National, Statewide, and MSA (Metropolitan Statistical Area)
This data is gathered in surveys of local employers and aggregated to micropolitan, metropolitan, statewide and national levels. The **OES** program is funded by the federal government, but the survey is performed by special units within each state's Employment Service program. Employment numbers and mean and percentile median wages are reported at the National, Statewide, and MSA level (where available). If there are fewer than 50 workers in an occupation in a given geographic area, then the OES data is usually suppressed. The OES survey is a rolling average as a different segment of the economy is surveyed on a 3 year repeating schedule. Results were updated twice per year (usually May and November). Beginning in 2006, this data will be reported only annually (May). For full details about the OES program, visit the OES site: www.bls.gov/oes/

CENSUS - Current Population Survey Data (National Data Only)
CENSUS data is based on the most recent Current Population Survey (CPS) of households. CPS data estimates U.S. national employment numbers and mean and median wage data annually by the CENSUS 2000 occupational code system. Results are available for Men only, Women only, or Both combined. The "published" version of this data includes occupations with 50,000 or more workers nationally. To report more information, SKILLTRAN uses the "unpublished" version of this data (that includes occupations with fewer than 50,000 workers nationally). Statistically, when there are fewer workers available, there is usually greater variation in the reported data. For more information about the CPS program visit this site: www.bls.gov/cps/home.htm

OOH – Occupational Outlook Handbook (National Data Only)
The OOH is a government publication released in April every other year that clusters occupations into about 250 very broad occupational groups. OOH information also includes a more limited set of data for about 155 occupations that were not studied in detail by the DOL. Intended for career exploration, it is a popular publication for job seekers of nearly every age. Detailed, but broad information available includes: Significant Points, Nature of Work, Work Conditions, Employment, Training, Outlook, Earnings, Related Occupations, and Sources of Additional Information. More details about the OOH are available at www.bls.gov/oco

IMPORTANT INTERPRETATION NOTES ON WAGE AND EMPLOYMENT DATA

Government wage and employment data is not collected at the DOT level. Rather it is collected using either the OES or the CENSUS occupational codes. There are 820+ OES occupation codes and 500+ CENSUS codes. Yet there are more than 12,700+ DOT occupations. For about 150 DOT occupations, there is a one-to one relationship of DOT code to OES or CENSUS group (i.e. one DOT occupation only in that OES or CENSUS group). For the other 12,550+ DOT occupations, the reported data for the groups refers to 2 or more DOT occupations per group. This presents an interpretation challenge most of the time.

DOT occupations do not occur with equal frequency within a given OES or CENSUS group. Customers are encouraged to examine the composition of each OES or CENSUS group before making that assumption. [Use the Job Browser *Pro* software to quickly examine the members of each occupational group or click the internet hyperlinks in a SKILLTRAN Labor Market Information report to see the DOT occupations in each group.] It is often discovered that specific DOT occupations are unlikely to occur frequently within that group because of the limited scope of employment for that occupation or perhaps at all given the absence of likely employers in a given geographic location. Proper interpretation of employment numbers and wages requires careful analysis of the available data in the context of a specific locale. SKILLTRAN is designing a new strategy to facilitate this interpretation process.

SKILLTRAN also reports national wage and employment (and other labor market and occupational) information from the *Occupational Outlook Handbook* that is published every other year by the US Department of Labor.

Special DOT-Industry Cross-Reference File
SKILLTRAN acquired, converted, currently maintains and uses a proprietary cross-reference between each DOT code and the new 6-digit version of the North American Industrial Classification System (**NAICS**). This new 6-digit system was developed in 1997, revised in 2002, and is maintained by the U.S. Office of Management and Budget (OMB). NAICS replaces the Standard Industrial Classification (SIC) that was originally developed in the 1930's. This enables SKILLTRAN to suggest **very** specific industries in which an occupation might be found. Several placement-oriented consultants read the entire **DOT** from a perspective of job placement! Using statistics and experience, each consultant selected industries in which each **DOT** occupation is likely to be found. As many as 25 specific industry categories are suggested per occupation. SKILLTRAN's maintenance of the cross-reference file is ongoing---as the job marketplace changes, so does this file.

Business Listings
SKILLTRAN data files include **nearly 13 million business listings** (throughout the entire US), referenced by the NAICS code system. The data is leased from a private marketing research firm called FirmaGraphix. The data is updated quarterly from hundreds of different public sources and captures new and emerging businesses as well as established companies. This is different from other data sources that rely on more dated annual yellow page listings or historical business credit information. Reliability of this data for purposes of Labor Market Survey (about 96%) is enhanced by validating the given business phone number vs. current directory assistance files.

Business listings information shows the name and primary business activity of each company (NAICS code), its approximate size range (number of employees and business sales volume), address, telephone number, and in most cases the name and title of a contact. When available, SKILLTRAN also reports the year the company was started, the business type (Single Location, Headquarters, or Branch Office), and if the business is considered a SOHO (Small Office or Home Office). SKILLTRAN business listing reports are created by NAICS industry, by geographic region (as narrow as a single zip or postal code, a radius (in miles) around a zip code, by single or multiple county, MSA, State, Region or Nationally. Further, the minimum and maximum company size (number of employees) can be specified in the search parameters. If a subset of the available listings is requested, the subset is a randomized selection within the search parameters, optimized to choose the most reliable data records. SKILLTRAN suggests the industries that are more likely targets for a given occupation. Customers can add their own industry choices and request that SKILLTRAN review and revise its suggestions.

Real Job Openings
SKILLTRAN has integrated access to a third-party database built and maintained by Employon, Inc. that contains more than 5.5 million current job openings, none older than 60 days since initial capture. The database is updated daily with 75,000-125,000 new openings obtained from search of 170,000+ web sites (career boards, popular job boards, recruiter sites, and employer postings on company web sites). SkillTRAN integrates labor market information to the requests and presents the resulting data (no more than 200 jobs are returned at any one time) in a useful format by known companies first, then by job posting source. Click the job title hyperlink to review the full details about each matching opening. Specific openings can be saved to a customized list tailored to each client.

Use of this new feature saves huge amounts of professional research time since there is one common, simple interface to so many different web sites, with no registration at each site required. The search is comprehensive, covering far more sites than most users know. There is no distracting advertising. It is estimated that about 80% of all internet-posted job openings are captured in this database.

The search process is key word based, rather than neatly structured like the DOT or other occupational coding systems. This has both advantages and disadvantages. The online help provides good suggestions about how to more finely tune the key word search process.

SKILLTRAN DATA LIBRARIES

The SKILLTRAN data libraries described below are seamlessly integrated in all products to allow customers a great deal of flexibility and precision in manipulating and accessing vocational information. They also allow SKILLTRAN to produce a continuing stream of user-friendly tools for research, planning, counseling, labor market survey, job placement and forensic vocational analysis.

The following data libraries are used to produce SKILLTRAN products and services:

Dictionary of Occupational Titles (DOT) - Revised Fourth Edition, 1991 (U.S. Department of Labor) - A government publication that contains the job description and a few characteristics of the unique occupations, including master titles and descriptions where appropriate. SKILLTRAN supplements the 12,741 original DOT occupations with information it develops in the same DOT style and format for new, emerging occupations. SKILLTRAN has added 23 additional occupations (developed by the US DOL that were never formally released after the publication of the 1991 DOT) to its new web-based service and to Job Browser Pro software. SKILLTRAN also includes in its new products a small number of clearly labeled, privately developed occupations following the guidelines of the 1991 Revised Handbook for Analyzing Jobs.

> Dictionary of Occupational Titles (DOT) - Revised Edition (Dept. of Labor, 1991)
> Dictionary of Occupational Titles (DOT) - Supplement (DOL, 1982, 1986)
> Dictionary of Occupational Titles (DOT) - Fourth Edition (DOL, 1977)
> Characteristics of Occupations - (DOL - Revised, 1992)
> Unpublished DOT Occupations (Utah Occupational Analysis Field Center, July 28, 1998)
>
> These include the most recent DOL information about:
> > **Task Descriptions** (complete narrative of occupations, including master titles where appropriate)
> > **Worker Trait Characteristics** of each generic occupation: Strength Requirements, Physical Demands, Working Conditions, General Educational Development, Aptitudes, Specific Vocational Preparation and Temperaments.

Alternate Job Titles
More than 36,000+ alternate job titles for the generic DOT occupations are linked, including 6,000+ military titles and descriptions for which there is no equivalent civilian occupation from the **Military-Civilian Occupational Source Book.** It also includes local and regional titles with automatic cross-reference to the proper base title. Titles from pre-1991 editions of the DOT are automatically cross-referenced to the proper 1991 DOT information. Customers are always encouraged to suggest additional titles for existing occupational descriptions.

WORK Field codes
A three-digit code used to reflect how job tasks get done and what gets done as a result of these work activities. There are 96 WORK fields used by the DOL. The first two digits often cluster related work activities into a homogeneous group. Each WORK field code encompasses a list of methods verbs that illustrate the objective of the WORK field. WORK Field codes are a critical component in SKILLTRAN's transferable skills technology. Six of these 96 WORK fields are combination WORK fields that cluster some of the discrete WORK fields into new unique groups. For more information, review Chapter 4 of the RHAJ. online.skilltran.com/rhaj/chapter4.htm

MPSMS codes
A three-digit code that describes the **M**aterials processed in an occupation, the final **P**roducts made, the **S**ubject **M**atter or data dealt with by the worker, or the **S**ervices rendered in doing the occupation. The 371 MPSMS codes are a critical component in SKILLTRAN's transferable skills technology. The first two digits usually cluster related MPSMS into a homogeneous group. For more information, review Chapter 5 of the RHAJ. online.skilltran.com/rhaj/chapter5.htm

Selected Characteristics of Occupations, 1992 (U.S. Department of Labor)
A government publication that contains **Worker Trait characteristics** for each of the published **12,741** unique DOT occupations. Characteristics are rated following the guideline of the *1991 Revised Handbook for Analyzing Jobs (RHAJ)* also published by the U.S. Department of Labor. SKILLTRAN uses the electronic version of these publications (and subsequent updates) that include:

Strength Requirements - Determined by evaluating a combination of factors such as lifting, carrying, pushing, pulling, moving objects, standing, walking, sitting, and using arm or leg controls. For more information, review Chapter 12 of the RHAJ. online.skilltran.com/rhaj/chapter12.htm

Physical Demands - The physical activities typically required to perform an occupation. DOL job analysts have rated the frequency of the activity typically required in 19 different motor and sensory dimensions for each of the occupations. These physical demand factors include: Climbing, Balancing, Stooping, Kneeling, Crouching, Crawling, Reaching, Handling, Fingering, Feeling, Talking, Hearing, Tasting/Smelling, Near Acuity, Far Acuity, Depth Perception, Accommodation, Color Vision, and Field of Vision. For more information, review Chapter 12 of the RHAJ. online.skilltran.com/rhaj/chapter12.htm

Environmental Conditions - The surroundings in which an occupation is typically performed. DOL job analysts have rated the frequency of the activity typically required in 14 different environmental/working conditions for each of the occupations. These environmental conditions include: Exposure to the Weather, Extremes of Cold, Extremes of Hot, Exposure to Wetness/Humidity, Noise Intensity Levels, Vibration, Atmospheric Conditions, Moving Mechanical Parts, Electric Shock Hazards, High/Exposed Places, Radiation Hazards, Explosion Hazards, Toxic/Caustic Hazards, and Other Significant Hazards. For more information, review Chapter 12 of the RHAJ. online.skilltran.com/rhaj/chapter12.htm

General Educational Development - Depicts the formal and informal education that develops basic reasoning, ability to follow directions, math and language skills. Experience and self-study can develop GED. For more information, review Chapter 7 of the RHAJ. online.skilltran.com/rhaj/chapter7.htm

Aptitudes - Capacities or specific abilities needed to learn to perform an occupation. DOL job analysts have rated the level of the aptitude typically needed in 11 different dimensions for each of the occupations. These aptitudes include: General Learning Ability, Verbal, Numerical, Spatial Perception, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity, Manual Dexterity, Eye-Hand-Foot Coordination, and Color Discrimination. For more information, review Chapter 9 of the RHAJ. online.skilltran.com/rhaj/chapter9.htm

Specific Vocational Preparation - The amount of time needed to learn the techniques and acquire the information for average performance in a specific DOT occupation. SVP comes from vocational/technical education, civilian, military, apprenticeship, and from in-plant and on-the-job training. The numerical code assigned refers to a level of functioning, not the number of years of preparation. For more information, review Chapter 8 of the RHAJ. online.skilltran.com/rhaj/chapter8.htm

Temperaments - The adaptability requirements made on the worker by specific types of job situations. Temperaments relate to worker personality traits and can impact long-term job retention. For more information, review Chapter 10 of the RHAJ. online.skilltran.com/rhaj/chapter10.htm

Industry Designation (ID)
The general industry group (140 total) in which an occupation is most commonly found. Certain "industry" groups refer to broad areas, such as "Clerical", "Professional", or "Any Industry". DOT job titles are followed by the name of the ID group. For a list of the industries, see the DOT (pp. 1024-1224). SKILLTRAN added one additional industry category - "Legal" in some of its products.

Guide for Occupational Exploration (GOE), 1979 - U.S. Department of Labor
A government publication that organizes DOT occupations into 350 unique clusters by similarity of interests. GOE codes are useful for career counseling. An interest in an area does not define the skill required to perform the occupation. Therefore, GOE codes should not be used for analysis of transferable skills. They are great for career exploration, however. SKILLTRAN uses the 1979 version of these codes, which is the official government version. An alternative, proprietary system of GOE coding is used by JIST in the *Enhanced Guide for Occupational Exploration*, but it is incompatible with the 1979 GOE.

Occupational Employment Survey (OES) - U.S. Department of Labor
Older OES codes use a 5 digit system developed by the U.S. DOL for clustering occupations for employer survey and long term occupational employment projections. The older OES classification (used pre-1999) was the basis for the new O*NET categories, which are directly tied to the new SOC categories. OES codes used in SKILLTRAN Labor Market Information use the new SOC-based codes. Each state collects and analyzes labor force statistics and prepares long-term job growth projections. National projections are prepared from the statewide data using a macro-economic model called the Input-Output Matrix. Visit www.bls.gov/oes for full technical information.

Standard Occupational Classification (SOC) - U.S. Department of Commerce
The older SOC used 4 digits to categorize occupations. The 643 older SOC codes were used by the U.S. Department of Commerce primarily to compare occupational structures in different countries. Under Federal mandate, the U.S. SOC codes were revised in 1998 and tweaked again in 2000. The new 7-character SOC is now the single official occupational classification system (821 unique occupations) being used by federal agencies to report occupational information. The first two digits of the SOC code refer to one of 23 major occupational clusters. The corresponding title is listed with each code number. SOC codes are also used in some educational systems and in some career guidance software programs. Canada has its own version of the SOC that is not the same as the U.S. SOC, but does mesh with the NOC structure. For more information, visit www.bls.gov/soc

O*NET Codes – (U.S. Department of Labor, 1998 and ongoing)
The 1,100+ codes used in this release were modified in 2000 and called O*NET, which combines and expands the numbering structure. In 2006, the codes were collapsed into smaller range of occupations to better coincide with the SOC. O*NET occupations use a 10-character code, the first seven of which correspond to the SOC2000 code system. O*NET is in a continuing state of evolution. The best source for information about O*NET is directly from the Department of Labor. The first round of validation through incumbent survey of much of the O*NET data is scheduled for completion in 2008. About 200 occupations are updated each year. Visit its web site at www.onetcenter.org

The structure of the O*NET codes is the future development path for the DOL. Some new software has been developed by the US DOL for use by career and job seekers. The software is called the Interest Profiler and the Work Importance Profiler. As a courtesy to SKILLTRAN customers, it is included at no additional charge on the Job Browser *Pro* Version 1.4 CD-ROM. You can also download it for free directly from the government at www.onetcenter.org/CIP.html

Current Population Survey (CENSUS) Occupational Codes - U.S. Bureau of the Census, 1990, 2000
A simple 3-digit occupational classification structure used by the U.S. Bureau of the Census to collect occupational information during its decennial census count and during its subsequent monthly sampling of the current population. There are 503 CENSUS 1990 codes, but only 469 are cross-referenced to the DOT. SKILLTRAN reports national mean and median wage data using a DOT to CENSUS cross-reference file. Wage and employment information reported in SKILLTRAN products use the new CENSUS 2000 code system, which is related to the SOC system. To learn more about the CENSUS system, visit www.census.gov/hhes/www/ioindex/overview.html.

Training Programs / Instructional Programs
Training programs are classified by CIP - The Classification of Instructional Programs. The CIP classification covers all levels of instructional programs from high school through post-Doctoral. To see more about the CIP classification, visit nces.ed.gov/pubs2002/cip2000/

National Occupational Classification (NOC), 2001 - (Human Resources and Skills Development Canada) The NOC system was developed and is published and used by Human Resources and Skills Development Canada (The Canadian government's equivalent to the U.S. Department of Labor) to provide a relatively simple framework of occupational classification for use in its employment, training, and work force development programs. The NOC system was created to develop a method of clustering occupations together that are relatively transferable within each code group due to similar skills, training, and responsibility. To see more about the NOC system, visit www.hrsdc.gc.ca/en/home.shtml

SKILLTRAN Vocational Products

THE PLACEMENT PROBLEM SERVICE (PPS)
PPS is an internet-based, user-directed, highly flexible system for navigating occupational information. Vocational counselors and case managers use PPS to identify the vocational potential of individuals, especially those whose abilities have been altered by illness or injury. PPS examines past work history (if any), considers functional limitations and worker characteristics, then suggests feasible occupations based on transferable skills, interests, and/or past industrial experience. All search results from a PPS report are automatically transferred to the new web-based service to access current national, state and local wage data; employment projections; businesses where employment opportunities might exist, and real job openings.

THE PRE-INJURY/POST-INJURY ANALYSIS (PREPOST)
PREPOST is an internet-based, comprehensive report that contrasts an individual's pre-injury occupational potential to post-injury potential. Performing 8 simultaneous transferable skills analyses, PREPOST identifies occupational loss in graphic and quantitative formats for occupations that are directly, closely, and generally transferable, both pre- and post-injury. Pre-injury and post-injury estimated median wages are displayed for the census groups within which the occupations fall. Customers can also enter an occupation to determine the differences between its requirements and the worker's post-injury profile. It shows only the differences and explains why a particular occupation may not have been included in a particular search. Search results from a PREPOSTS report are automatically transferred to the new web-based service to access other current national, state and local wage data; employment projections; businesses where employment opportunities might exist, and real job openings.

THE CAREER CONSULTANT SERVICE (CCS)
This self-directed, internet-based career planning report for a non-disabled population lists job titles and descriptions of occupations an individual should consider based on interests, previous experience, or training. Current and long-term employment projections identify the increasing or decreasing demand for various occupations. Estimated local wages are displayed. A helpful worksheet is provided to assist in career exploration and decision-making.

WEB-BASED LABOR MARKET INFORMATION, BUSINESS LISTINGS, and REAL JOB OPENINGS
Integrated to the classic internet-based services above, this new server introduces web-based technology to the delivery of labor market and real job openings data. Reports are instantly prepared and made available for download, printing, or email delivery. This is the new platform to which all classic services will eventually migrate.   Visit www.skilltran.com/online.htm for full details.

JOB BROWSER *PRO*
This is a CD-ROM distributed product that installs on a customer's PC. It does not require an internet connection, but it does hyperlink to the internet when a connection is available. Job Browser *Pro* is designed for career transition & disability management professionals in many settings, including rehabilitation, education, legal testimony, disability claims management, workforce development, outplacement, resume preparation and career transition. The product contains many of the same data resources as the online services. Text from the Occupational Outlook Handbook is interwoven with other DOT and labor market details to quickly deliver an integrated, comprehensive collage of career and occupational information. It is simple enough to be used by clients as well. It is designed as a lookup product, with 16 different ways to retrieve information. Many customers use Job Browser *Pro* for "lightweight" transferable skills analysis for simple cases and for career exploration. Complete product details are located at http://www.skilltran.com/jb_overview.htm

FREQUENTLY ASKED QUESTIONS (FAQs)

How should I handle a case when …. ?

SKILLTRAN has prepared a series of suggestions on factors to consider for post-injury adjustments following a significant range of challenging conditions, such as:

Sit/Stand Jobs; Repetitive Motion Disorders; One Hand/One Arm; No Overhead Reaching; Knee/Ankle Injuries; Spinal Cord Injuries; Traumatic Brain Injuries; Hearing Impairment; Visual Impairment; Non-English Speaking; Pre-existing Conditions (PREPOST).

To see these suggestions, online customers can login to https://online.skilltran.com, then click the Support hyperlink. A "Support for Online Services" page will appear. Scroll the left margin down to "Tips and Techniques", then click the hyperlink for "Common Case Situations". Click a situation for more details. Right click any topic, then print the topic if desired.

What if work history is limited or a person did not work at what they were trained to do?

Add as many DOT occupations to work history as possible that reflect the relevant work that a person has done in the past. Sometimes, it might take 2 or more DOT occupations to fully describe the duties and tasks a person had to perform in a single position held by an individual. Include both civilian and military work experience and significant/lengthy volunteer or leisure experience if a person developed sufficient proficiency.

If a person completed training but never worked in that field, consider the time since completion of the training, the impact of technological advances since then, and decide whether to include a representative occupation in the work history for which the person could have been hired with that training. Doing so adds more WORK fields and MPSMS codes to the work history, which when combined with other codes from work history, might produce some interesting new suggestions.

How do I come up with better employment numbers for a specific DOT occupation?

As outlined in the important section regarding Interpretation Notes, labor market data is not collected at the DOT level. Except for about 150 DOT occupations, the data is collected for larger statistical groups using the OES or CENSUS occupational codes.

A popular, simple way of determining employment numbers is to simply divide the number of DOT occupations in a given statistical group equally. For example, if an OES group has 10 DOT occupations in it, then the assumption is made that 10% of the number employed for that group represent the frequency for each DOT number. This approach requires an assumption that all DOT occupations in a specific occupational group occur with equal frequency. Careful examination of the 10 DOT occupations would most likely reveal that this is a poor assumption, as some of the occupations in that occupational group may occur with very high, very low, or even no frequency in a given geographic area.

A better, more defensible method is to consider the industries in which each DOT occupation in a statistical group may occur. Look at the frequency with which those industries occur in a given geographic area. If there are few or no companies that would hire for that occupation in a particular geographic area, then eliminate that occupation from further consideration. By reducing the 10 occupations in a group to maybe 5 that might truly exist, a much better estimation of employment numbers can be obtained. SKILLTRAN is developing an automated methodology to better estimate employment numbers using various database resources. In the meanwhile, consider looking at the Long Term National Occupational Employment Projections available in SKILLTRAN's new web-based service for each DOT occupation. This *free* feature shows the national projections and occupational employment distribution across various industries, and shows the more likely industries to employ a specific DOT occupation at the top of the list. This helps to build a better sense of the likely frequency with which a DOT occupation might be found in various industries. But there should also be some proportional weighting of each DOT occupation in a statistical group that occurs in the same industry. No matter the methodology, it will still represent an estimate of actual employment numbers.

What about O*NET – Didn't it replace the DOT?

The new O*NET (Occupational Network) is purported to "replace" the DOT, largely because the DOL did not want to continue to collect occupational data for as many occupations as are contained in the DOT. Accordingly, the number of discrete O*NET occupations was reduced to about 1,100 with data initially obtained from the existing 12,700+ DOT occupations. The detail of the DOT is lost when aggregated to this new, broader level of occupational groups. An examination of the DOTs within each O*NET group quickly reveals that there is often a very broad range of SVP, Strength, Physical Demands, and GED-RML across all of the member DOTs. O*NET introduced a significant number of new occupational and worker characteristics following its new Content Model. However, the new abilities and work context factors (vaguely similar to physical demands and environmental conditions) often have poor anchor points for descriptions of work behavior. Little or no instrumentation is in place to measure these new factors. O*NET has no corresponding variable to the DOT's overall definition of Strength. At present, the assigned Abilities ratings have largely been constructed from analysis of the old DOT information. Little data collection has been done to validate these ratings. While DOT worker characteristics and narrative descriptions continue to age, initial data collection (from incumbent surveys rather than trained job analysts) will not be completed until the year 2008.

For all these reasons (and more), the Social Security Administration has rejected use of the O*NET in its current disability adjudication process and continues to use the DOT as its primary authoritative reference (Social Security Rulings 00-4p). A more complete explanation of the issues is available in a paper co-authored by Jeffrey A. Truthan (President of SKILLTRAN) and Sylvia Karman (SSA-Senior Policy Analyst). The paper was published in 2003 in the Journal of Forensic Vocational Analysis and is called "Using the DOT during a time of transition to O*NET".

Timeliness of DOL publications

DOL budget constraints often limit the amount of information they can publish in hardcopy (book format). For example, the complete Worker Trait characteristics of occupations were not published when supplements to the **DOT** were released in 1982 and 1986. However, these Worker Trait characteristics were available in electronic format. SKILLTRAN uses this electronic format to report data collected by the DOL, but which is not "published" in the traditional sense. E & F Publications uses the same electronic format to publish a hardcopy book called The Classification of Jobs (**COJ**). The DOL released the expanded Characteristics of Occupations data in May, 1992, but **only** via electronic media. SKILLTRAN incorporates all of the latest information about the **DOT** in all of its products and services. These include all updates after the initial release through October 1998, the last known DOL update of DOT data that also included a re-numbering of some DOT codes, deletion of others, and the addition of 23 new DOT occupations.

SKILLTRAN vs. Printed Information

In contrast to DOL or privately printed publications, SKILLTRAN data reflects the latest possible information. The DOL **did** occasionally make changes to physical demands, strength, etc., for some occupations between hardcopy publications of the **DOT**. These changes reflect error corrections and recompilation of job analysis information. SKILLTRAN does receive notice of these updates, and they are entered into its systems right away. This policy of making immediate updates leads to an occasional discrepancy between SKILLTRAN's report of the DOL characteristics of an occupation vs. the hardcopy version of the public or private printed material, which may be outdated and erroneous. **SKILLTRAN uses the most recent release of DOL information.**

SKILLTRAN Data Changes to Government Data + SKILLTRAN-developed occupations

When SKILLTRAN obtains government data (whether in printed or electronic format), it is carefully reviewed and analyzed for missing or incomplete data and spelling errors. SKILLTRAN corrects spelling errors when they are discovered. When questions arise about missing, inaccurate or incomplete data, SKILLTRAN contacts the source of the government data for clarification. When SKILLTRAN discovers inconsistencies within the occupational data, SKILLTRAN reports these inconsistencies to the government, often suggesting changes that eliminate the inconsistencies. Sometimes, the matter is simple keyboarding errors by the original government data source. SKILLTRAN abides by the government's final ruling on such suggestions. SKILLTRAN does not otherwise make its own arbitrary changes to government data.

In SKILLTRAN's classic internet-based services (PPS, PREPOST, and CCS), the DOT database used is strictly the 12,741 original DOT occupations published in 1991 and as updated subsequently

by DOL. In its new web-based online services and in the Job Browser Pro software, the DOT database includes the 23 new occupations informally released by the DOL in 1998. It also includes 19 additional occupations described by certified vocational professionals carefully following the conventions of job analysis defined in the RHAJ. These 19 occupations were added in the mid 1990's and are very clearly labeled as SKILLTRAN developed occupations.

Reliability and Validity of SKILLTRAN
Discussion

Reliability is a measure of the consistency of a test, method, procedure or process. When a test, method, procedure or process is repeated multiple times, reliability indicates how often the same outcome results.

Validity is a measure of the ability of a test, method, procedure or process to estimate a desired performance or result. Validity can be studied from various perspectives:
- Criterion-referenced or Predictive validity (Does a process estimate or predict something accurately?)
- Concurrent validity (How well does a process correspond with an existing, proven process?)
- Content validity (How well does a process fit defined criterion?)
- Construct validity (Does a process measure what it is supposed to measure?)

Reliability studies of computer software are really a part of the software developer's quality assurance process. SKILLTRAN's process for analysis of transferable skills follows a clearly defined set of programmed computer code. An advantage to computer programs is that when the computer receives data, it will repeatedly follow exactly the same programmed steps each time the process is initiated. If the same data is entered each time (e.g. work history and post-injury restrictions) and the same process (e.g. TSA) is requested, then the output of the computer program will be the same unless underlying data files used in the process have been altered (e.g. DOT, worker characteristics, business listings, wage data, employment numbers, etc.). When the underlying data files are held constant (unchanged), then the TSA search process is 100% reliable (i.e. consistent). SKILLTRAN conducts extensive quality assurance testing prior to the release of a new or modified product. Sometimes, SKILLTRAN solicits testing by selected customers prior to deployment to discover aspects of a new process that need to be tweaked. When customers report any kind of unusual situation, SKILLTRAN replicates and then rectifies the issue. Fixes to online issues are deployed when customers are not connected to SKILLTRAN servers to avoid disruption of a customer's session. Fixes/enhancements to the Job Browser *Pro* software are deployed at periodic system updates. New features deployed in any product are extensively crosschecked using other SKILLTRAN products to further assure consistency of results across the various service delivery platforms.

Any validation study of computer software should be fairly narrow. As a set of programmed computer code, validation should assure that a computer-based process closely follows a prescribed manual process. In the case of SKILLTRAN TSA searches, great care has been taken to assure strict adherence to the *Code of Federal Regulations* [CFR 20 404.1568(d)], the definition for Transferability of Skills used by the Social Security Administration 1-2 million times per year in its disability adjudication decisions since 1980. As a *criterion reference*, this federal law is very explicit. Using this TSA technology, SKILLTRAN's predecessor (Ability Information Systems - AIS) built a highly specialized computer program called VARS – The Vocational Adjudication Rehabilitation System in the mid-1980s. In a multi-year, multi-state study of Computer Assisted Vocational Evaluation (CAVE) systems, VARS was shown to clearly emulate the manual process followed by disability examiners for vocational decisions, stumbling only in the areas where SSA policy was itself unclear. The thousands of cases processed established *high concurrent validity* with the SSA manual process.

As described in the section about the SKILLTRAN Process for TSA, SKILLTRAN uses WORK fields (RHAJ – Chapter 4) to represent the work activities of occupations. The use of tools, equipment and work aids often accompany the specific narrative statements of tasks typically performed by a worker in a particular occupation. DOL job analysts assigned WORK field(s) to each occupation to best summarize the narrative description. DOL also assigned MPSMS code(s) (RHAJ – Chapter 5) to reflect the **M**aterials used by the worker, the **P**roducts produced by the worker, the **S**ubject **M**atter considered and/or the **S**ervices delivered by the worker. Study of these critical code systems should

reasonably establish **content validity** for the purpose of analyzing transferable skills as defined in the Code of Federal Regulations (CFR). Botterbusch (1986, p. 4) wrote "True transferable skills analysis must be based on MPSMS (i.e. Materials, Products, Subject Matter, and Services) and Work Fields (Elliott, 1983)".

Predictive validity is outside the realm of computer programs for TSA. Too many uncontrollable external variables influence the achievement of benchmarks worth studying, such as occupation or job family at case closure, wage at closure, and placeability. Economic, family, financial, medical, social, transportation, personal preference, and other uncontrollable factors interact in complex ways to influence such outcomes. A person is often capable of finding a new job that might require use of abilities not demonstrated in prior work history. Sometimes sheer financial necessity drives a person to take a job that is inconsistent with prior work history. Others sometimes intentionally seek a change from past work history. Assessment of occupations based on demonstrated transferable skills should be carefully distinguished from assessment of a wider range of occupations that might be within a person's abilities, irrespective of prior experience.

Transferable Skills Analysis

Perhaps the larger question is whether the SSA CFR criterion reference can be applied to other situations outside of the SSA arena. To the best of SKILLTRAN's knowledge, no other federal laws define transferability of skills. Absent other legal guidance, part d (1-3) of CFR 20 404.1568 provides a solid **construct** that should be equally useful in other venues. The WORK field and MPSMS approach has been referenced in some professional literature as the "Classic TSA Model". Most SKILLTRAN competitors have built their software using this classic model approach.

Some practitioners choose to include occupations with an SVP of 2 within a TSA search. SKILLTRAN follows the SSA definition of unskilled occupations as those with an SVP of 1 or 2. Some practitioners also choose to include occupations that are within the basic abilities of a worker, but which do not share at least one of the WORK fields and MPSMS codes from prior work history. By strict SSA definition, such occupations are not "transferable". They may indeed be relatively easy to learn for a worker experienced in one or several areas, but they do fall outside the clear CFR definition. SKILLTRAN software is designed to assist customers to discover these alternate opportunities through automated searches using other code systems. *Searches based on other code systems often produce very different lists of occupations* that may be quite useful in career exploration and alternative vocational/rehabilitation planning.

Error Rates for Wage and Employment Numbers

Because SKILLTRAN uses government data sources for wage and employment numbers, validity data is established by the original sources of this data, which are the reporting government agencies. CPS data reports its Standard Error of Measurement (SEM). OES data is reported with the Relative Standard of Error (RSE). The error rates quoted by these agencies are identified in each SKILLTRAN report as the citation of the Confidence Interval (i.e. the **±** value after each employment number or mean wage). Visit the web sites and examine the published technical information for each data source. SKILLTRAN uses the same government data, but reformats the information so that it is more useful for specific counseling, planning, and forensic purposes. Please carefully review the section on Interpretation Notes as well.

Bibliography – Reference List

SKILLTRAN has prepared and periodically maintains a special bibliography of reference material relating to the analysis of transferable skills. The most current version of this list is available at online.skilltran.com/support/TSAReferenceList.htm

SKILLTRAN vs. Other Vocational Products

Brown, McDaniel, Couch, and McClanahan (1994) conducted an independent survey of various "Job Search" software programs. In the survey of users, CAPCO products (now SKILLTRAN products) were rated at the top in two categories: Comprehensiveness and Overall Satisfaction. SKILLTRAN remains committed to its customers to maintain this edge through current, ever-expanding database resources, continued re-engineering of its software technology, and unparalleled customer support by phone, fax, email, and web site support.

At the present time, there are only a few major players in this niche industry. The initial development costs for this kind of specialized software are significant. Ongoing support, research and development, marketing, and maintenance of data, software, and customers add to the ongoing expense. SKILLTRAN customers encounter alternative TSA reports from four primary sources: OASYS, VocRehab.com, ERI, and McCroskey. The following summarizes primary similarities and important differences between SKILLTRAN and these alternative systems.

OASYS by Vertek, Inc.
> Installed PC software with some optional internet hyperlinks - OASYS also closely adheres to the classic TSA model. Optional modules are available for ongoing maintenance for Labor Market Information (LMI). Separate reports for each major phase (e.g. work history, search profile, search results, LMI). Pre-Injury/Post-Injury module assumes that all DOT occupations in a Census or OES group occur with equal frequency. Initial purchase price is expensive for smaller customers, as are annual maintenance fees. Of all the alternate systems, OASYS most closely emulates a SKILLTRAN TSA search. Differences in search results occur when work history involves combination WORK fields. Combination WORK fields include: Machining, Upholstering, Fabrication-Installation-Repair (Structural, Electrical-Electronic, or Mechanical), or Processing-Compounding. SKILLTRAN's handling of combination WORK fields stays closer to transferable occupations. Business listings available through an expensive, optional OASYS module must be user maintained. [SKILLTRAN updates its business listings quarterly]. Support policies are unknown, but may require OASYS customers to funnel questions through a sales representative. OASYS users are required to enter a lot more information into the product before any results can be generated, requiring a higher level of user training for proficiency.

VocRehab.com
> Online services. Pricing similar to SKILLTRAN. Follows the classic TSA model. Has not participated in opportunities to submit reports for comparison with other vocational products. LMI may not be as current as SKILLTRAN data. No longer offers business listings for Job Search or Labor Market Survey. Like OASYS, reports are fragmented rather than integrated into a cohesive whole. Does not offer access to real job openings.

ERI – Economic Research Institute – enhanced DOT (eDOT)
> Hybrid (Installed PC software on a proprietary platform with some ties to online data). Pricing varies by product and usually offered on an annual subscription basis. A relative newcomer to transferable skills analysis, purports to follow the classic model. ERI has historic roots in excellent wage and salary information gathered from many sources worldwide. Large established corporate customer base. Recently acquired PAQ services and moved management of the eDOT project to PAQ. Offers occupational data collected from current job analyses. Prior to acquiring PAQ Services, began capturing WORK field and MPSMS coding in mid 2002 as part of their original eDOT data collection efforts. Markets itself heavily as the updated DOT, but has huge disclaimers regarding defensibility of the data. Expensive fees ($10,000 retainer) if they are called to testify (carefully review the mandatory eDOT License Agreement Rider). Results of their classic TSA search have not been made available for comparative study.

McCroskey Software – www.vocationology.com   McDOT   McPlot   MVQS   MTSP   Volcano
Installed PC Software. Rather than follow the classic TSA model, McCroskey products focus on a statistical model (multiple linear regression identifying 24 critical variables) used to calculate a unique Vocational Quotient (VQ) representing an overall level of difficulty. Occupations with similar VQ scores are represented as transferable (or at least within the realm of other potential occupations) following a weighted method of classification based on WORK field and MPSMS. Has developed about 200 additional occupations. Offers many statistical studies showing correlations between VQ and wages. Has additional layers of calculations to estimate the frequency with which occupations may occur. Computes economic loss. Click here for a more detailed analysis of the McCroskey model of transferable skills and questions that can be raised regarding this approach.

Other alternative products no longer available:

LifeStep by Legaltech – Support discontinued, LMI cross-references now obsolete, web site no longer in operation

RAVE – Acquired by ACT, DOS product never converted to Windows platform

LMA – Labor Market Access by E & F Publications – Support discontinued, never converted to Windows platform

SKILLTRAN Company History

SKILLTRAN has designed and continues to develop, deliver, support, and maintain comprehensive database information products for professional vocational counselors. SKILLTRAN is pleased to be able to continue a 25 year legacy of innovation, affordable service and unparalleled support to the vocational industry.

SKILLTRAN President Jeff Truthan has served the rehabilitation and disability management industry since 1973. Trained as a Vocational Rehabilitation Counselor, Jeff spent nine years in direct client services as a VRC and Vocational Evaluator in a variety of rehabilitation settings. Using this "knowledge from the trenches", from 1985 to 1997 he served in a various support, sales, training, product management and leadership capacities at Ability Information Systems (1981-1988) / CAPCO: The Capability Corporation (1988-1996) / JobQuest (1996-2000). He had the opportunity to design and support all of the above products. Mr. Truthan legally acquired the hardware and software assets from the now defunct JobQuest Corporation. Ability Information Systems (AIS) originally pioneered the core transferable skills analysis technology in 1981. AIS and CAPCO are referenced in literature dating from that era.

Mr. Truthan directs the continued evolution of all the products. SKILLTRAN is steadily re-engineering its user interface for both online services and the Job Browser *Pro* software. SKILLTRAN also expands its core resources to integrate data useful to its customers. SKILLTRAN welcomes customer requests. SKILLTRAN is committed to delivery of cost-effective and comprehensive services with superb support of its customers.

SKILLTRAN products are designed to work together to serve a variety of your vocational information needs.

There is some overlap among the various products, but the products are designed to address different aspects of vocational and career counseling.

- **Job Browser *Pro*:** Clients need occupational and career information as they explore their options and interests. Clients, counselors, and case managers can all use the Job Browser *Pro* to further explore internet-based report suggestions. The job analysis report format is very popular. Job Browser *Pro* is built for high-volume, daily use!

- **Internet-Based Services:** Rehabilitation and career guidance professionals need to accurately capture work history, interpret supporting vocational information, determine maximum residual abilities, identify suitable occupational alternatives within residual skills, interests, and abilities of their clients, and establish the local feasibility of a selected group of identified options. Case Managers and counselors use the Internet-based services on a per case basis (one-shot diagnostic) to help develop powerful and defensible opinions for counseling, guidance, labor market survey, job search/job placement and expert testimony.

Users of other TSA products: Can use SKILLTRAN's Internet-Based Services to get Labor Market Information & Business Listings for Labor Market Survey or for Job Search. Helps to establish the feasibility of a job goal.

Primary Product Features	Job Browser *Pro*	PPS	PRE-POST	CCS	LMI, Business Listings, Real Job Openings
Operating System	Windows	Internet	Internet	Internet	Internet
Professional-oriented tool / report	◆	◆	◆		◆
Client-oriented report for Self-Directed Interpretation	◆			◆	◆
Report Delivery (Emailed reports can be printed/edited)	Printer Clipboard	Email	Email	Email	**Print/Save/ Email**
Career Exploration	◆	◆		◆	
Lookup by 36,000+ Civilian and Military Job Titles	◆	◆	◆	◆	◆
Complete *DOT* descriptions and characteristics	◆	◆	◆	◆	◆
Cross-references to other occupational code systems	◆	◆	◆		
Documentation of Work History	◆	◆	◆	◆	
Adjustment for Residual Functional Capacities / Abilities		◆	◆		
Search by Transferable Skills	"Lightweight"	◆	◆	◆	
Search by Interests	◆	◆		◆	
Search by Major Occupational Code Systems	◆	◆			
Employment Numbers & Long Term Growth Projections	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide
Wage Information (Optional online – included in Job Browser *Pro*)	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide	US/MSA Statewide
Business Listings for Labor Market Survey / Job Search		Optional	Optional		◆
Real Job Openings					◆
Training Plan Development	◆	◆			
Resume Development (Skills & Competencies)	◆				
Job Analysis	◆				
Occupational Loss - Pre-Injury vs. Post-Injury			◆		
SSA Vocational Expert Testimony	◆	◆			
Private storage area for client information		◆	◆		◆
Help (+ Exclusive Web-based "Customers Only" Area)	PC	Web	Web	Web	Web

Since 2001, **Job Browser *Pro*** is endorsed by the *International Association of Rehabilitation Professionals* as "*reasonably priced, high quality and beneficial to IARP members*".