



## Mind Meld:

How code systems help to find occupations *quicker*.

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President – SkillTRAN LLC  
[www.skilltran.com](http://www.skilltran.com)

## Objectives

- **Types of coding systems**
- **Public Sources of Occupational Data**
- **Purposes of each coding system**
- **In depth review of each relevant classification**
- **BLS – NCS – New Occupational Requirements**
- **Learn to use specific codes systems for lookup**
- **When to use specific codes in Rehab/RTW**
- **[ Review of classic TSA process ]**
- **[ Future concerns about moving to O\*NET ]**

# Handouts

- Slide Notes
- Pocket Guide to the DOT
- Lists of Code systems:
  - OGA – Occupational Group Arrangements
  - GOE – Guide for Occupational Exploration
  - CENSUS Occupational Codes
  - CENSUS to SOC Cross-Reference
  - Combination Work Fields
  - DOT Industry Classification
- Revised Handbook for Analyzing Jobs (RHAJ- 1991)
  - Chapter 3 – Data-People-Things
  - Chapter 4 – Work Fields
  - Chapter 5 – MPSMS Codes
- BLS – NCS – Occupational Requirements Survey
- Interesting Articles about Codes & TSA
  - Job Matching Systems – 1989
  - Re-examination of Transferability of Skills Analysis
    - Parts I and II – By Sidney Fine – 1955
  - Fifty Years of Things, Data, People:
    - Wither Job Analysis? 2004

## Employment Data

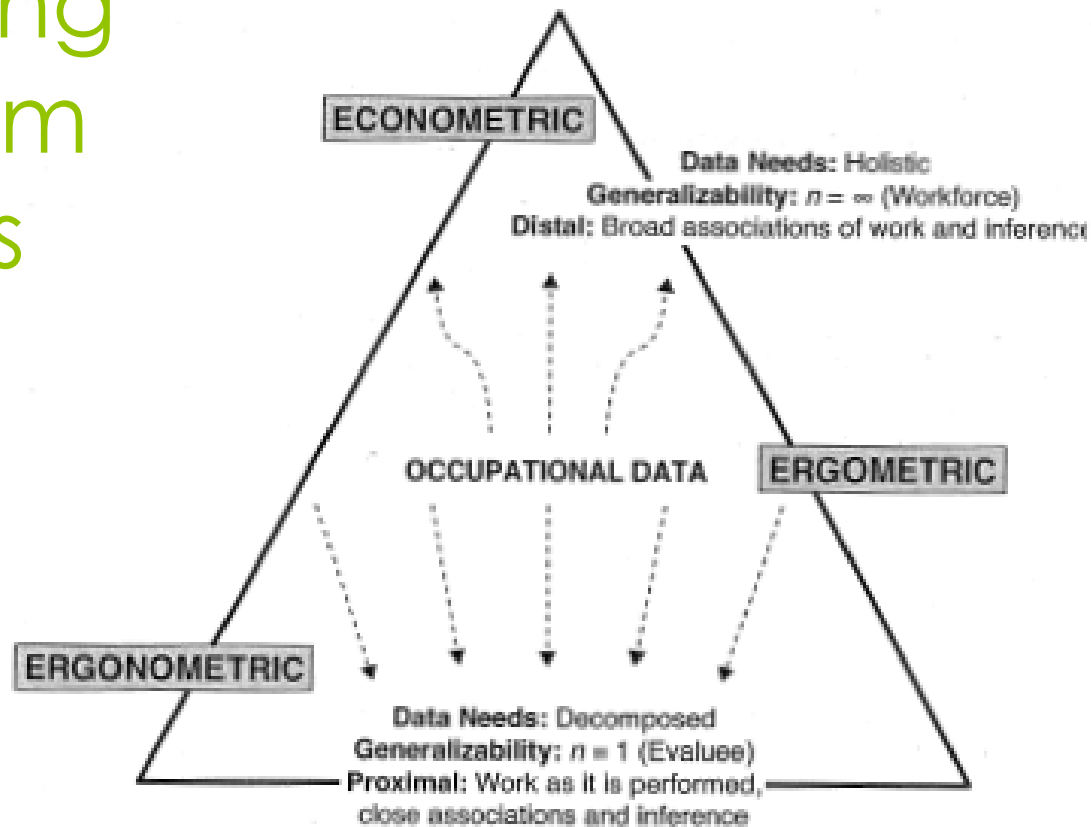
### Occupation

- **DOT**
- **O\*NET**
- National Compensation Survey
- OOH [National Only]
- Career Guide to Industry - CGI
- Current Population Survey (Census **CPS**)
- **OES** - Occupational Employment Survey
- Long Term Employment Projections
- State Labor Market Information Depts.

### Employment/Industry

- JOLTS
- QCEW (ES-202)  
Quarterly Census of Employment & Wages
- County Business Patterns  
US / State / County / Zip
- [Input/Output Matrix]
- Employer Listings
- Professional Associations
- Business Assn/Journals
- Manufacturer Guides

## Coding System Types

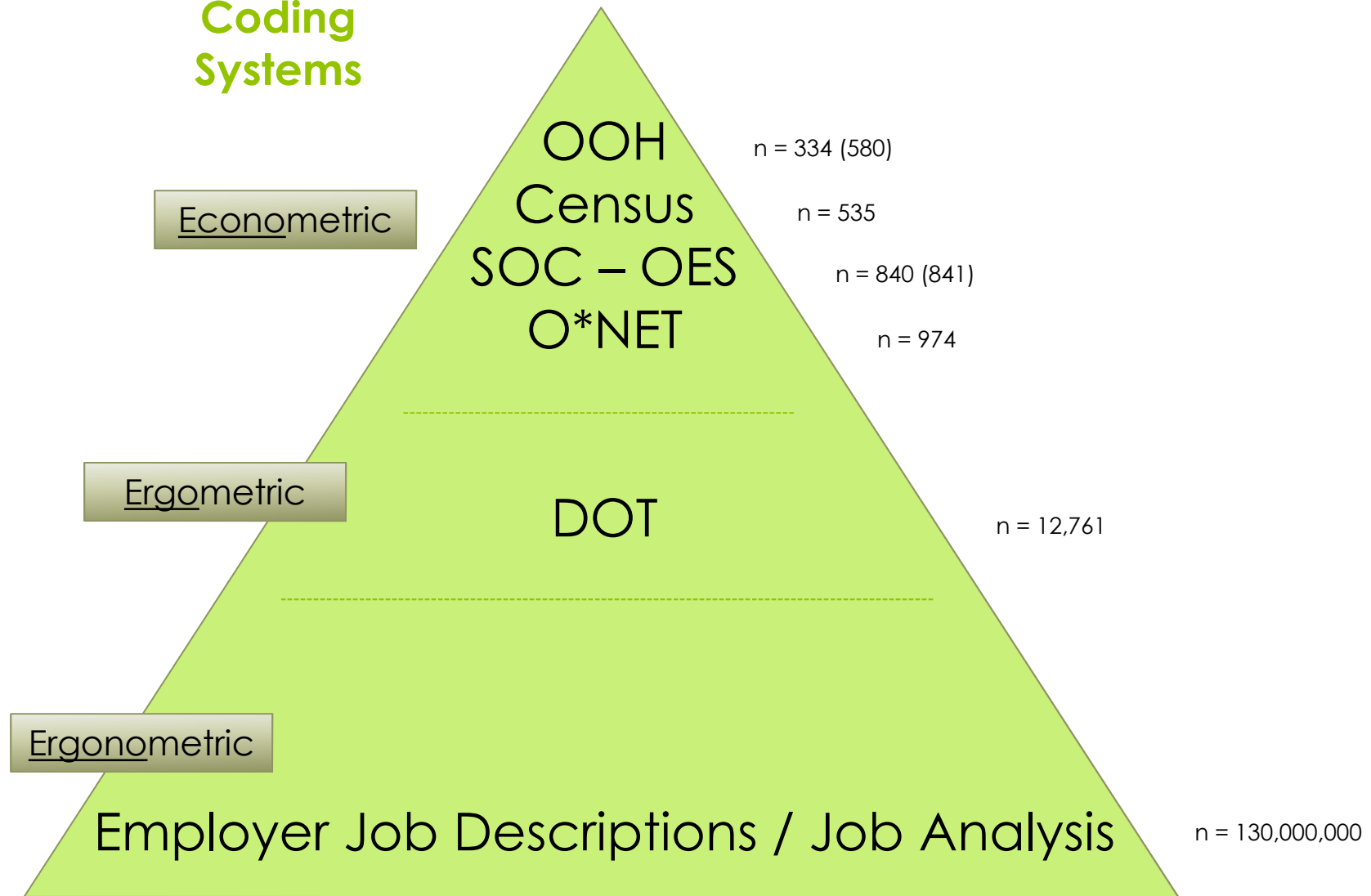


**FIGURE 9.1** Levels of occupational information: econometric, ergometric, ergonomic.

Source: Adapted from National Research Council, Committee on National Statistics, Division of Behavioral and Social Sciences and Education, Panel to Review the Occupational Information Network (O\*NET). (2010).

Mark Wilson, Ph.D. and Mary Barros-Bailey, Ph.D. in Rick H. Robinson (Ed.)  
*Foundations of Forensic Vocational Rehabilitation* (2014)

## Occupational Coding Systems



# World of Work



## An alternate view of the World of Work





WOW – Exposed !



Double WoW !!



Carefully slice each segment ...



Slice ... then Dice



Oops .. I didn't want all that!

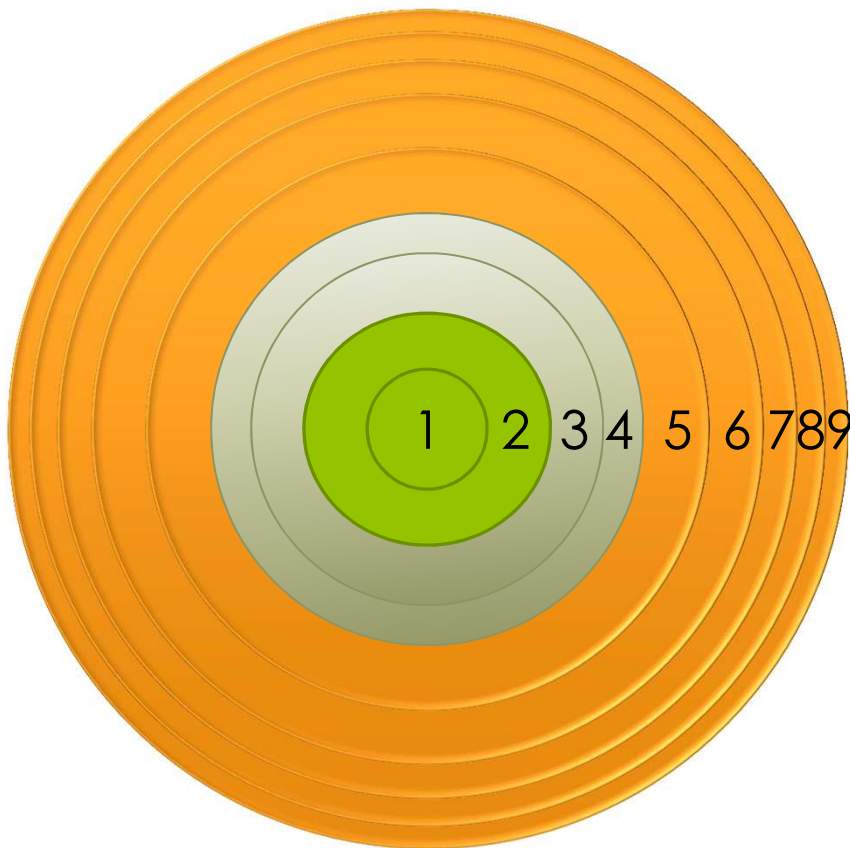


- Can I identify where each piece came from?
- Do I want all of these pieces?
- Are some pieces different from others?
- How could I be more selective?

# Half Sphere of WoW



## WoW by SVP



1-2 = Unskilled  
3-4 = Semi-Skilled  
5-9 = Skilled

Unskilled = 24.5%

Semi-Skilled = 31.0%

Skilled = 45.5%

DOT – Occupational Distribution

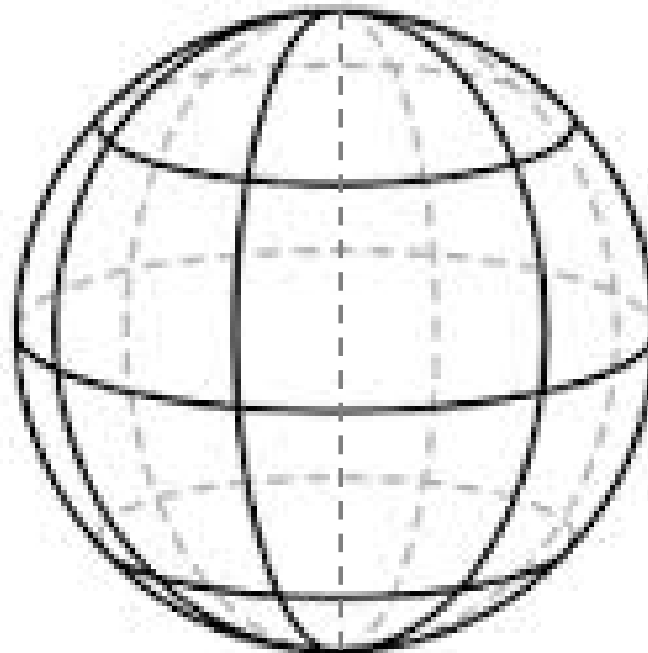
## New World view

# Sphere

North Pole

Shape

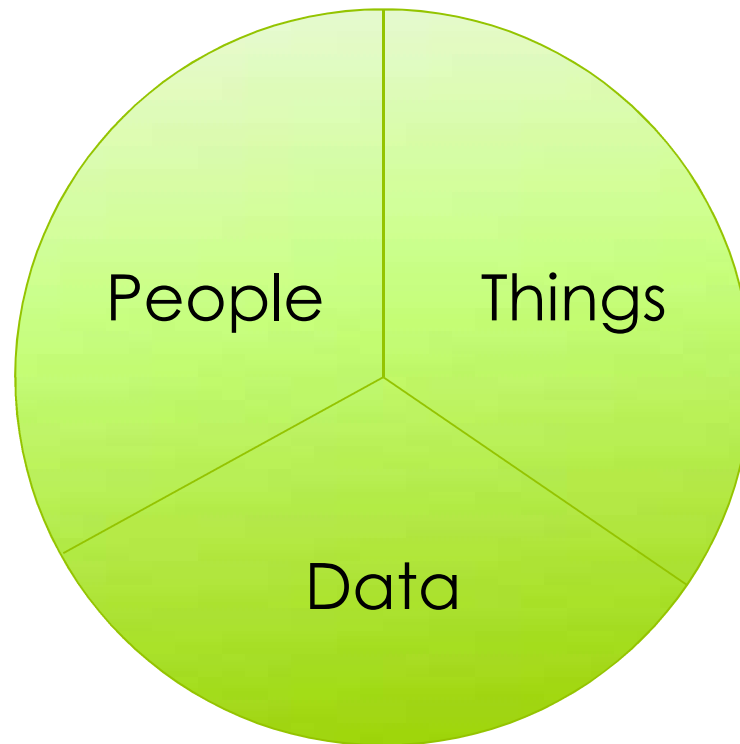
Structure



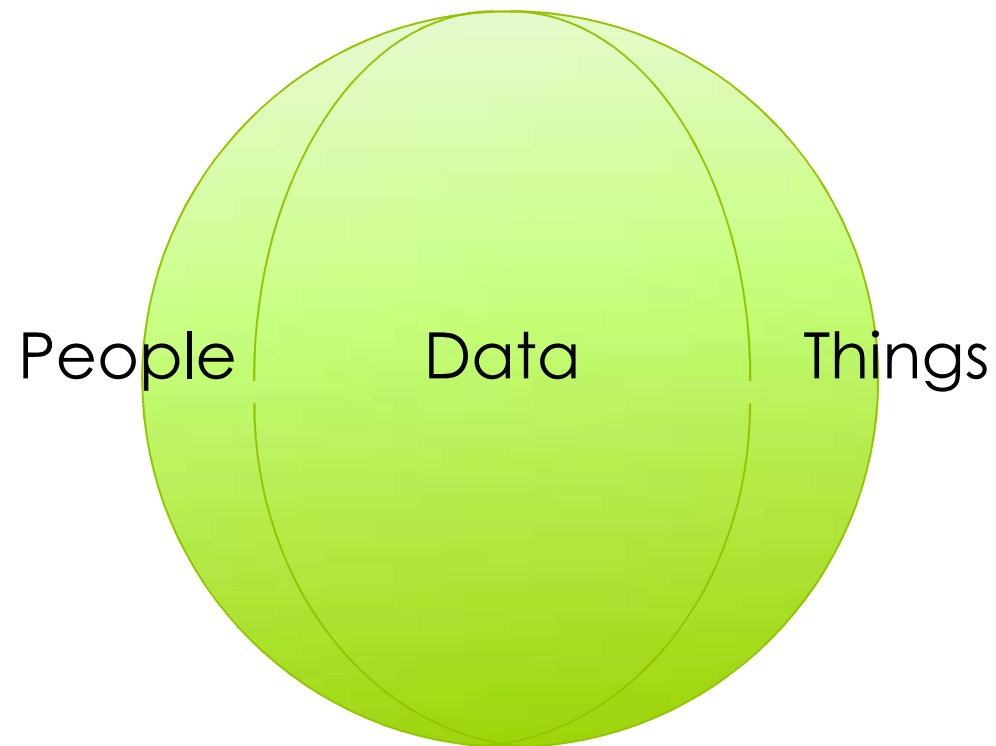
South Pole



## Above North Pole (Polar view)

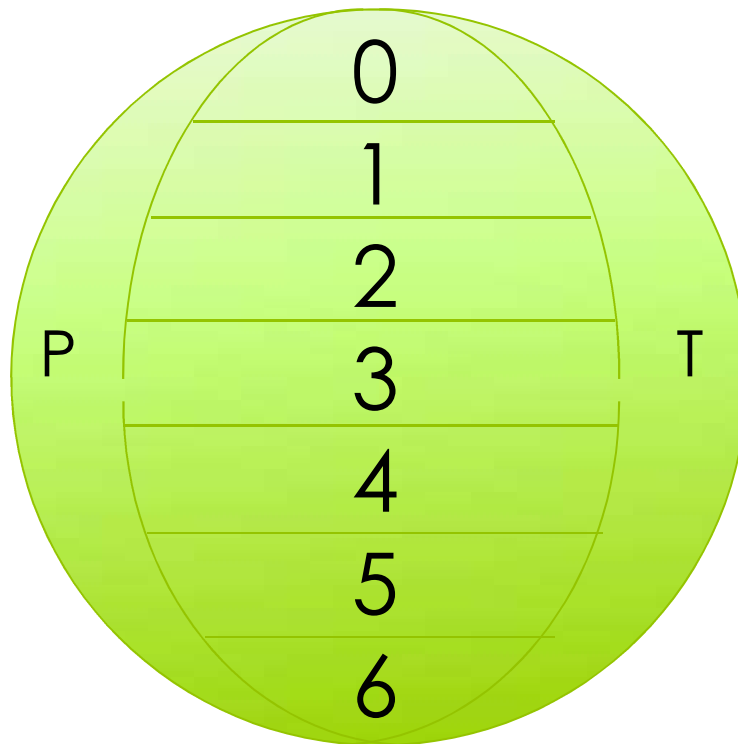


# Back to Equator View



## Equatorial View

Data

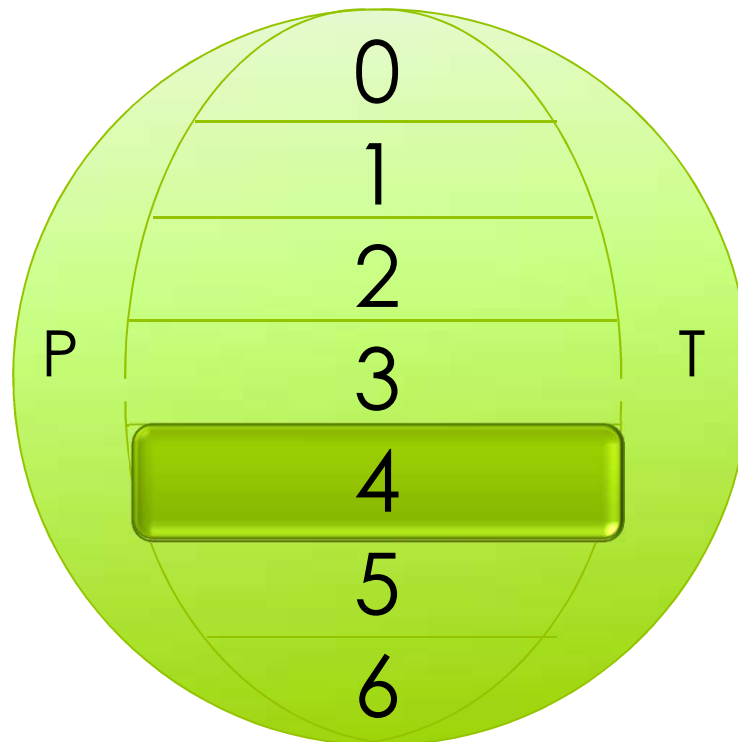


**Data**

- 0 – Synthesizing
- 1 – Coordinating
- 2 – Analyzing
- 3 – Compiling
- 4 – Computing
- 5 – Copying
- 6 – Comparing

## Equatorial View

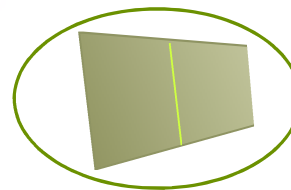
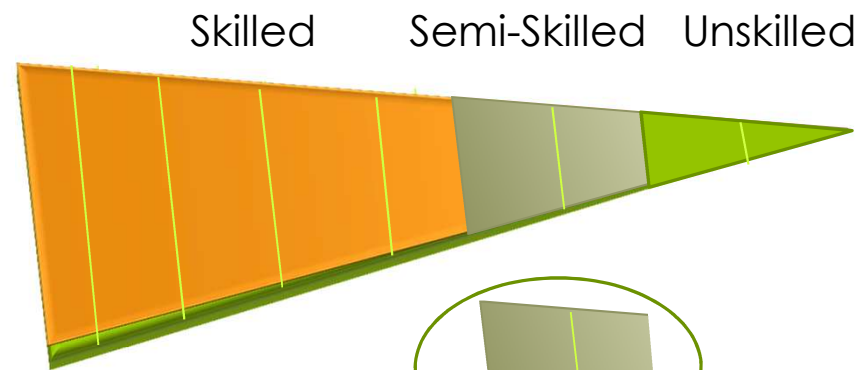
Data



**Data**

- 0 – Synthesizing
- 1 – Coordinating
- 2 – Analyzing
- 3 – Compiling
- 4 – Computing
- 5 – Copying
- 6 – Comparing

## Data – 4 – Computing Slice



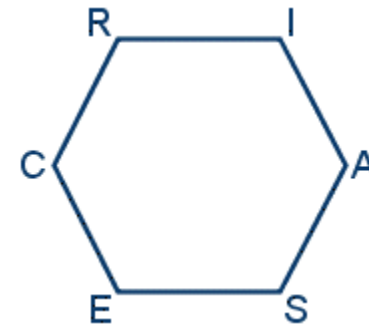
Smaller chunk of  
Semi-Skilled Occupations  
with Data = 4

## Back Above North Pole

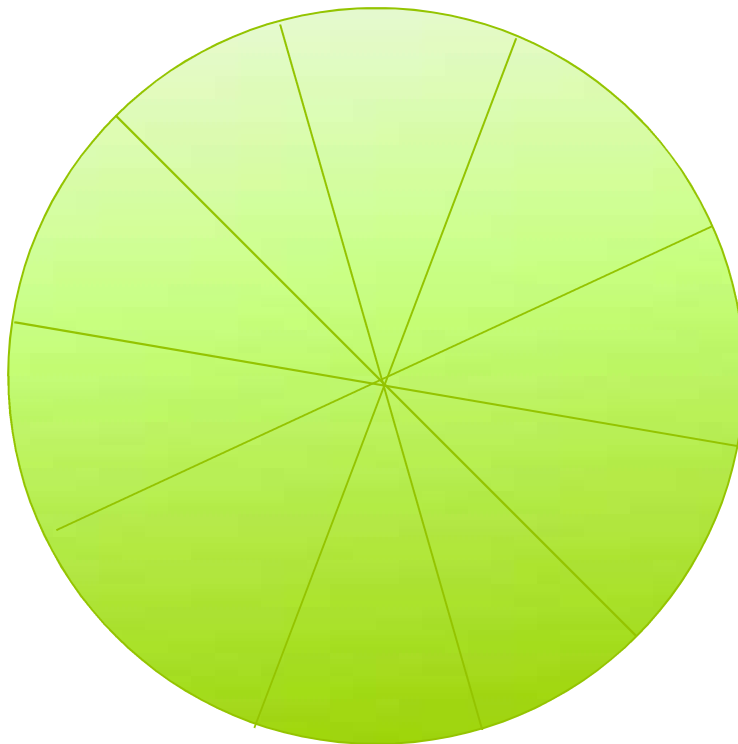
### Holland Code - RIASEC



SDS - Self-Directed Search  
Strong Interest Inventory  
O\*NET Interest Profiler  
ACT Interest Inventory  
Career Code  
Career Key  
Others ...



## Occupational Group Arrangements



**0 / 1** – Professional,  
Technical & Managerial

**2** – Clerical & Sales

**3** – Service

**4** – Agricultural, Fishery, &  
Related

**5** – Processing

**6** – Machine Trades

**7** – Benchwork

**8** – Structural Work

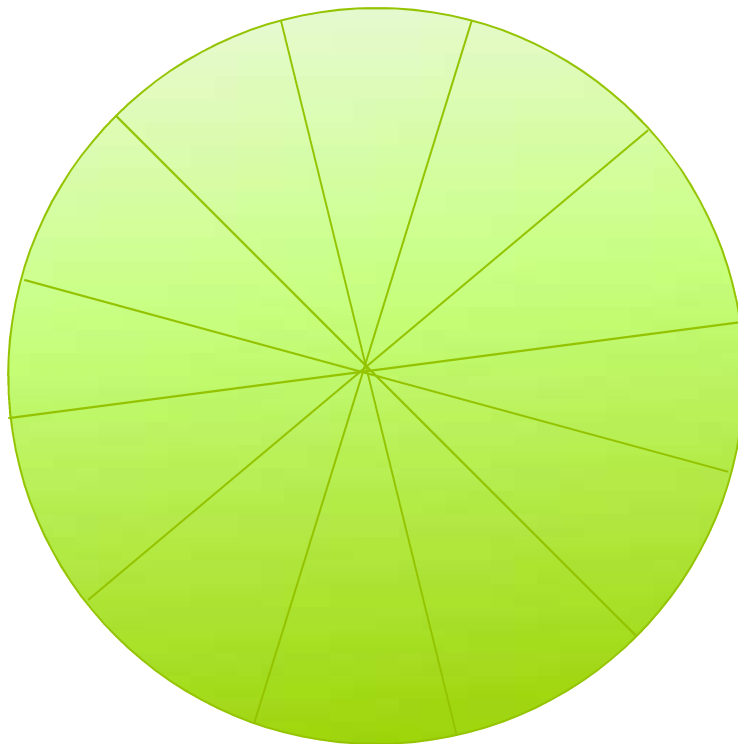
**9** – Miscellaneous

**9 Broad Categories**

**82 Occupational Divisions**

**559 Occupational Groups**

## Guide for Occupational Exploration - GOE



- 01** – Artistic
- 02** – Scientific
- 03** – Plants & Animals
- 04** – Protective
- 05** – Mechanical
- 06** – Industrial
- 07** – Business Detail
- 08** – Selling
- 09** – Accomodating
- 10** – Humanitarian
- 11** – Leading – Influencing
- 12** – Physical Performing

**12 Major Groups**  
**66 Work Groups**  
**348 SubGroups**



## Classic Transferable Skills

**Work Fields – n = 96**

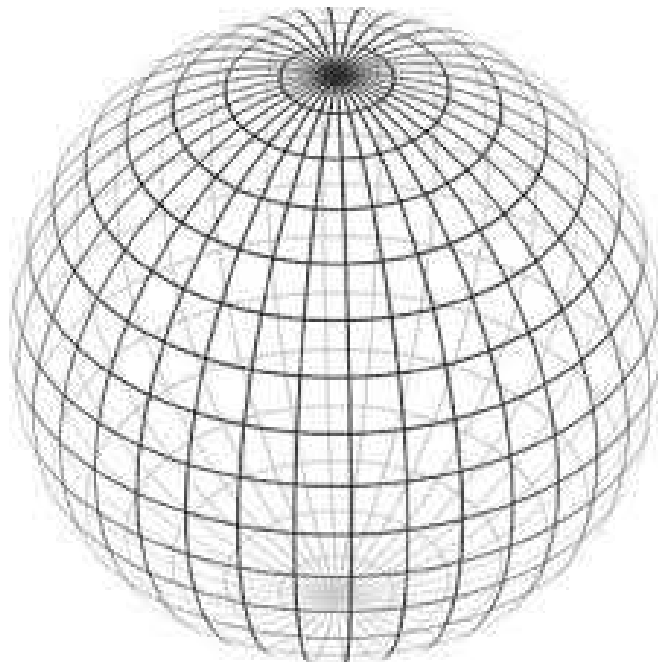


**Specific  
Vocational  
Preparation**



**MPSMS**  
**Materials  
Products  
Subject Matter  
Services**

**48 Groups  
336 Categories**



## Decennial Census (2000, 2010)

- Population count of all U.S. Citizens
- Captures wide range of demographics, including occupation
- Two+ year reporting delay
- Self-reported information
- Occupation reported by Census Occupational Code (n=535)
- [www.census.gov](http://www.census.gov)
- American Fact Finder – [factfinder.census.gov](http://factfinder.census.gov)
- American Community Survey - [www.census.gov/acs](http://www.census.gov/acs)  
(ongoing survey of about 1% of population – 3 million/year)

## Current Population Survey - CPS

- Conducted by Bureau of the Census
- Gender; Full-Time; Part-Time; Self-Employed workers
- 60,000 contacts/month among pool of 210,000 households
- Gathered monthly; aggregated and reported annually in January for the prior year
- Published data vs. “unpublished” - Table A26
- Occupation, industry, unemployed reason, hours
- Survey of Households [not employers]
- National Data only – Captures gender data
- [www.bls.gov/cps](http://www.bls.gov/cps)

## OES – Occupational Employment Survey

- 840 SOC (= 841 OES) occupations (F-T & P-T)
- Survey based on responses by 1.2 million non-farm employers
- Does not include self-employed or agricultural industry
- National, State, Metropolitan & Non-Metro (Rural) Regions
- Minimum reporting is 50 in an area (if not all at one firm)
- Data collected during a 3 year survey cycle of 450 industries
- Reported using a rolling average of employment & wage ranges
- > 70% response rate required for publication
- Released once per year in Spring
- [www.bls.gov/oes](http://www.bls.gov/oes)

# DOT Industry Classification

- 140 “Industry” Groups
- Some are not really industries, but rather broad occupational classes such as:
  - Any Industry (not really “Every” ... rather “Many”)
  - Professional and kindred
  - Clerical
- Sometimes helpful
- Reflect the industry where the DOT occupation was studied, but may not reflect all of the industries where the occupation might be found

***“ ... Therefore, industry designations are to be regarded as indicative of industrial location, but not necessarily restrictive.”***

1991 DOT – xxi - Footnote

# Industry Classifications

## SIC - 1987

0x – Agriculture  
10-14 – Mining  
15-17 – Construction  
2x-3x – Manufacturing  
4x – Transportation, Utilities  
50-51 – Wholesale  
52-59 – Retail  
6x – Finance, Insurance, Real Estate  
7x-8x – Services  
9x - Public Administration [Govt.]

[www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm)

## NAICS 2007/2012

11 – Agriculture  
21 – Mining, Quarrying, Oil-Gas Extraction  
22 – Utilities  
23 – Construction  
31-33 – Manufacturing  
42 – Wholesale Trade  
44-45 – Retail Trade  
48-49 – Transportation / Warehousing  
51 – Information  
52 – Finance / Insurance  
53 – Real Estate / Rental / Leasing  
54 – Professional / Scientific / Technical  
55 – Management of Companies  
56 – Administrative / Support / Waste Mgmt  
61 – Educational Services  
62 – Health Care and Social Assistance  
71 – Arts, Entertainment, Recreation  
72 – Accommodation / Food Services  
81 – Other Services  
92 – Public Administration  
[Fed/State/Local Govt.]

## OES – Long Term Employment Projections

- Updated every two years
- Shows projections for occupations by industry
- Uses OES Survey data plus Current Employment Statistics (CES) and the CPS
- Cites 300+ NAICS industries for 700+ OES groups
- Data suppressed if < 50 workers in an industry
- 10 year projection model uses labor force, aggregate economy, final demand (GDP), industry output, employment by industry, and employment by occupation
- [www.bls.gov/emp/home.htm](http://www.bls.gov/emp/home.htm)

## State Labor Market Information Sources

- Should be available on web for most states
- Differences between State LMI and Federal LMI
- Check here for your state:  
[www.bls.gov/bls/ofolist.htm](http://www.bls.gov/bls/ofolist.htm)



## CIP – Classification of Instructional Programs

- Code for a course of study, whether academic major, voc-tech program, or Adult Learning
- 47 Major categories
- Colleges, universities, voc-tech programs use these to report # enrolled, completed (graduated), and now employed

# Career Pathways

- **01** - Agriculture / Food / Natural Resources
- **02** - Architecture / Construction
- **03** - Arts / A/V Technology / Communications
- **04** - Business / Management / Administration
- **05** - Education / Training
- **06** - Finance
- **07** - Government / Public Administration
- **08** – Health Science
- **09** – Hospitality / Tourism
- **10** – Human Services
- **11** – Information Technology
- **12** – Law / Public Safety / Security
- **13** – Manufacturing
- **14** – Marketing / Sales / Services
- **15** – Science / Technology / Engineering / Math
- **16** – Transportation / Distribution / Logistics

## NCS — National Compensation Survey

- Employer survey of work levels, salaries, wages and benefits (both F-T & P-T)
  - Was reporting by SOC (OES) codes
  - Nuances within occupations (work levels)
  - [www.bls.gov/NCS](http://www.bls.gov/NCS)
- Now focusing on possible data collection for new physical demand elements by SOC/O\*NET code
  - Open comment period on new data elements for Physical Demands, Environmental Conditions, and Mental/Cognitive Factors
- <http://bls.gov/ors/>

# BLS – NCS – ORS

## Occupational Requirements Survey

- Cognitive Elements
- Social / Interpersonal Elements
- SVP
- Physical Demands
- Environmental Conditions

# BLS – NCS – ORS

## Occupational Requirements Survey

### Cognitive Elements

- Complexity
- Closely Controlled
- Predictability of Typical Day

# BLS – NCS – ORS

## Occupational Requirements Survey

### **Social / Interpersonal Elements**

Interaction with Coworkers,  
Familiar Contacts, General Public

- Collaboration
- Talk about work-related topics
- Type of Contact (Structured → Not)

# BLS – NCS – ORS

## Occupational Requirements Survey

### Physical Demands

- Sit / Stand / Walk At Will
- Keyboarding
- Other Office Tasks
- Hearing / Vision
- Manipulation
- Lifting / Carrying
- Reaching
- Driving
- Pushing / Pulling
- Getting Low
- Climbing

# BLS – NCS – ORS

## Occupational Requirements Survey

### Environmental Conditions

- Noise
- Outdoors
- Extreme Heat
- Extreme Cold
- Wetness
- Humidity
- Heavy Vibration
- Fumes / Noxious Odors, Dusts, Gases
- Toxic / Caustic Chemicals
- Proximity to Moving Mechanical Parts
- High, Exposed Places



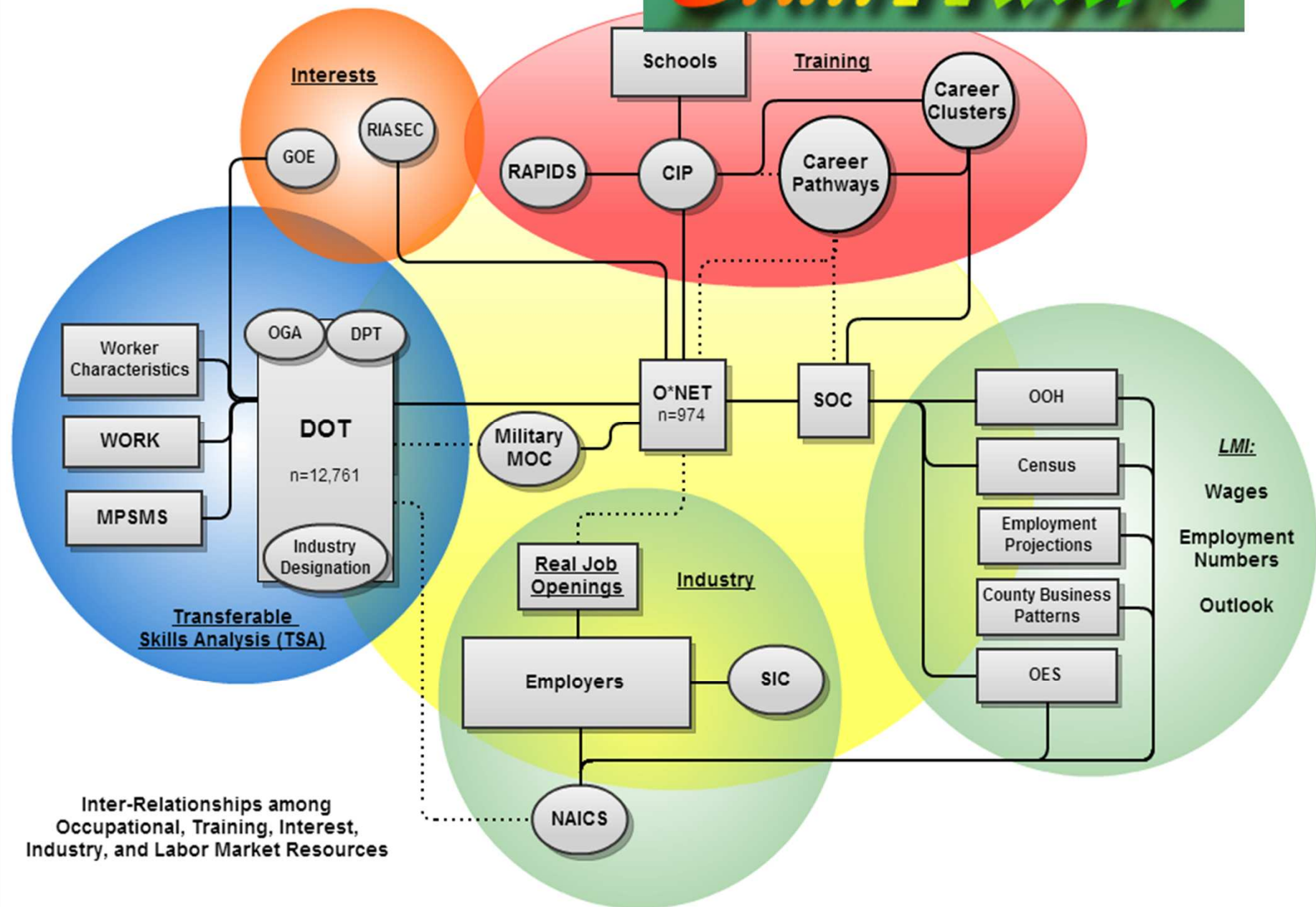
# BLS – NCS – ORS

## Occupational Requirements Survey

**Public Comment Period until 5/23/2014**

- Get the documents
- Review them (at least the ORS form)
- Prepare and submit comments

# SkillTRAN



## DOT Lookup Exercises

Titles, Codes, and Synonyms, Oh My!

- Stage Hand
- Ceramic Pourer
- Martial Arts Instructor
- Cutter Supervisor (Fabric)
- County Commissioner
- School Board Member
- Call Flow Supervisor
- Manufactured Home Sales
- Lead Generation Supervisor
- Plugging holes in floor boards

## Processes Change over Time

- **`60s & `70s** – Printed books – DOT 3<sup>rd</sup> Edition  
Worker Trait Groups – OGA / DPT
- **1977** – DOT 4<sup>th</sup> Edition
  - Many more occupations & variables
  - Coding at the unique DOT level
  - Designed for computerization
- **`80s** – Evolution of PC and Online Software
- **`90s** – Evolution of LMI resources & Internet
  - Reduction of DOL commitment to occupations
- **2000+** - Convergence of multiple resources for better interpretation of available data
  - Increasing availability of web-based data from govt.
- **2008** – SkillTRAN Industry Context Method
- **2016/17/18** – DOT “Replacement”  
or switch to SOC/O\*NET ?

Table 15.1 Suggested Search Strategies by Venue

Setting	Function	Search Codes
Social Security	Claims Adjudication	DOT, TSA*
	Ticket to Work	Interests, CIP, OGA Industry
Long-Term Disability	Claims Management	DOT and TSA*
	Retraining	Interests, CIP
Workers' Compensation	Return to Work	Industry, DOT, TSA*
State VR	Assessment, Planning, Placement	O*NET, CIP, TSA* Interests
Veterans rehabilitation	Assessment, Planning, Placement	MOC, O*NET, CIP, Interests
Corrections	Assessment, Planning, Placement	Interests, O*NET, DOT
Workforce development	Job Matching	O*NET
Welfare – Workfare	Assessment/Training	Interests, TSA*, CIP, O*NET
Schools – special education	Assessment/Planning	Interests, O*NET
Career transition	Assessment	Interests, O*NET, DOT
<b>Personal Injury Cases</b>		
Injury to children	Evaluating Potential	DOT/(O*NET)
Workers' compensation	RTW/Employability	DOT/O*NET
Catastrophic injury	RTW/Employability/LOEC	DOT/O*NET
Wrongful death	Future Lost Earnings	LMI–O*NET
Spousal support	Employment Potential	DOT/O*NET/LMI
TSA*=WF+SVP+MPSMS		

**Different  
Searches  
lead to  
different  
suggestions**

Truthan & Field,  
in Strauser, D.R. (2014)

# VDARE

## Transferability of Skills Worksheet

- Vocational Diagnosis and Assessment of Residual Employability (VDARE)
- Process evolved from 1977 joint effort by McCroskey, Wattenbarger, Field, & Sink
- Field & Sink published training manual 1980
- Method became very popular through training
- Solid methodology – Arduous manually!
- Foundation for all automated methods

## Typical Case Process

**Enter Work History**

**Adjust Worker Profile**

**Search Strategy**

**Supplement Search Results**

Wage Information / Employment Numbers

Long Term Outlook

Feasibility – Employment Survey

Real Job Openings –

Job Search / Placement

*Key  
Differences*



## Transferable Skills Strategies to Implement

### VDARE

- **OGA** – Occupational Group Arrangement
- **DPT** – Data, People, Things
- **GOE** – Guide for Occ. Exploration
- **WORK** Field (MTEWA)
- **SVP** – Specific Vocational Preparation
- **DOT Industry**

### Classic TSA Model

- **WORK** Field (MTEWA)
- **SVP** – Specific Vocational Preparation
- **MPSMS** – Materials, Products, Subject Matter, and Services

### O\*NET

- **Tasks**
- **T2 – Tools & Technologies**



**SSA Definition of  
Transferability of Skills**

20 CFR 404.1568(d)

**(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.

# **Classic TSA Model**

## **Work Field - SVP / MPSMS**

### **WORK Field (WF)**

“...categories of technologies that reflect how work gets done and what gets done as a result of the work activities of a job: the purpose of the job.” *RHAJ* p. 4-1

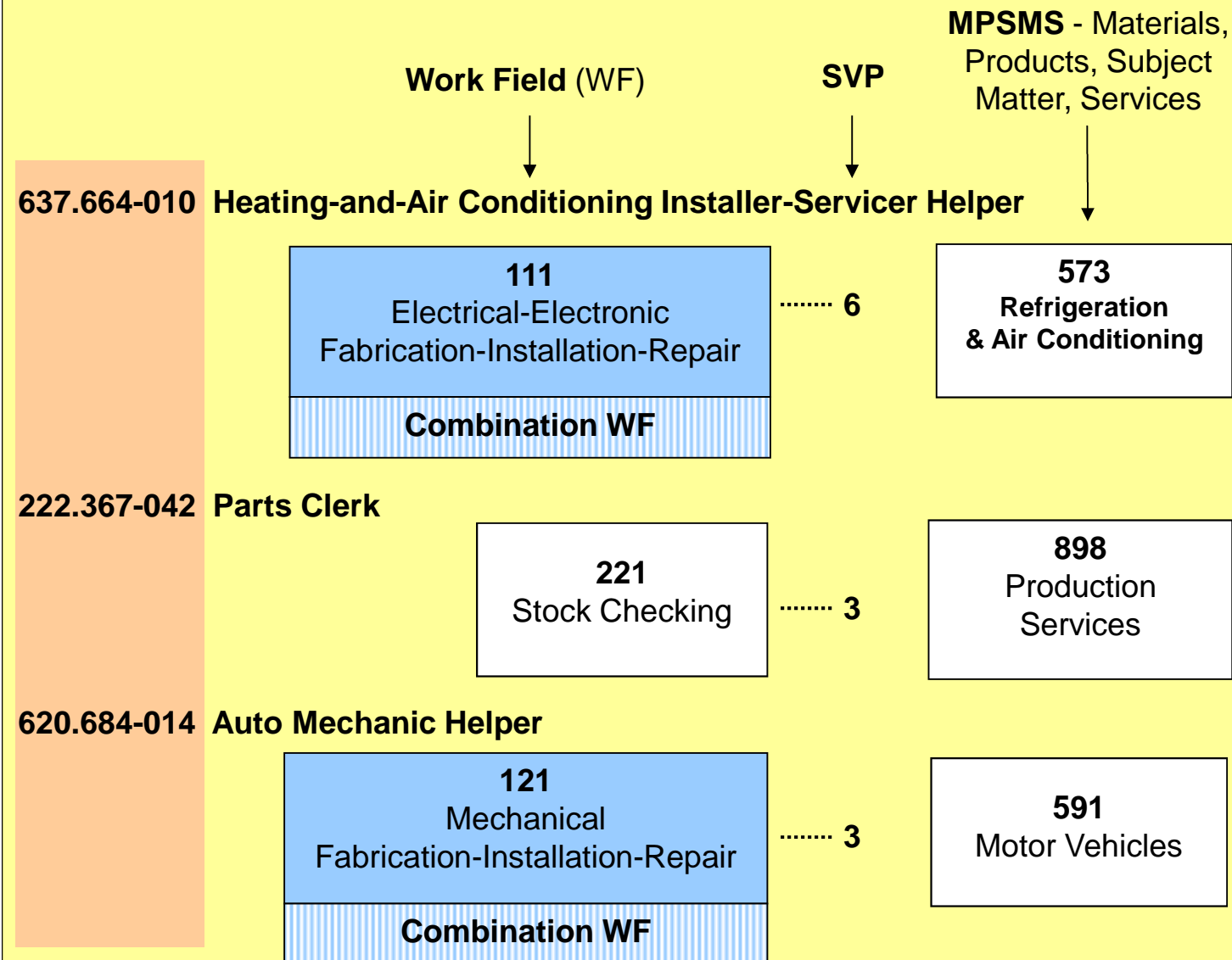
### **SVP – Specific Vocational Preparation**

“...the amount of lapsed time required by a typical worker to learn the techniques, acquire the information, and develop the facility needed for average performance in a specific job-worker situation.” *RHAJ* p. 8-1

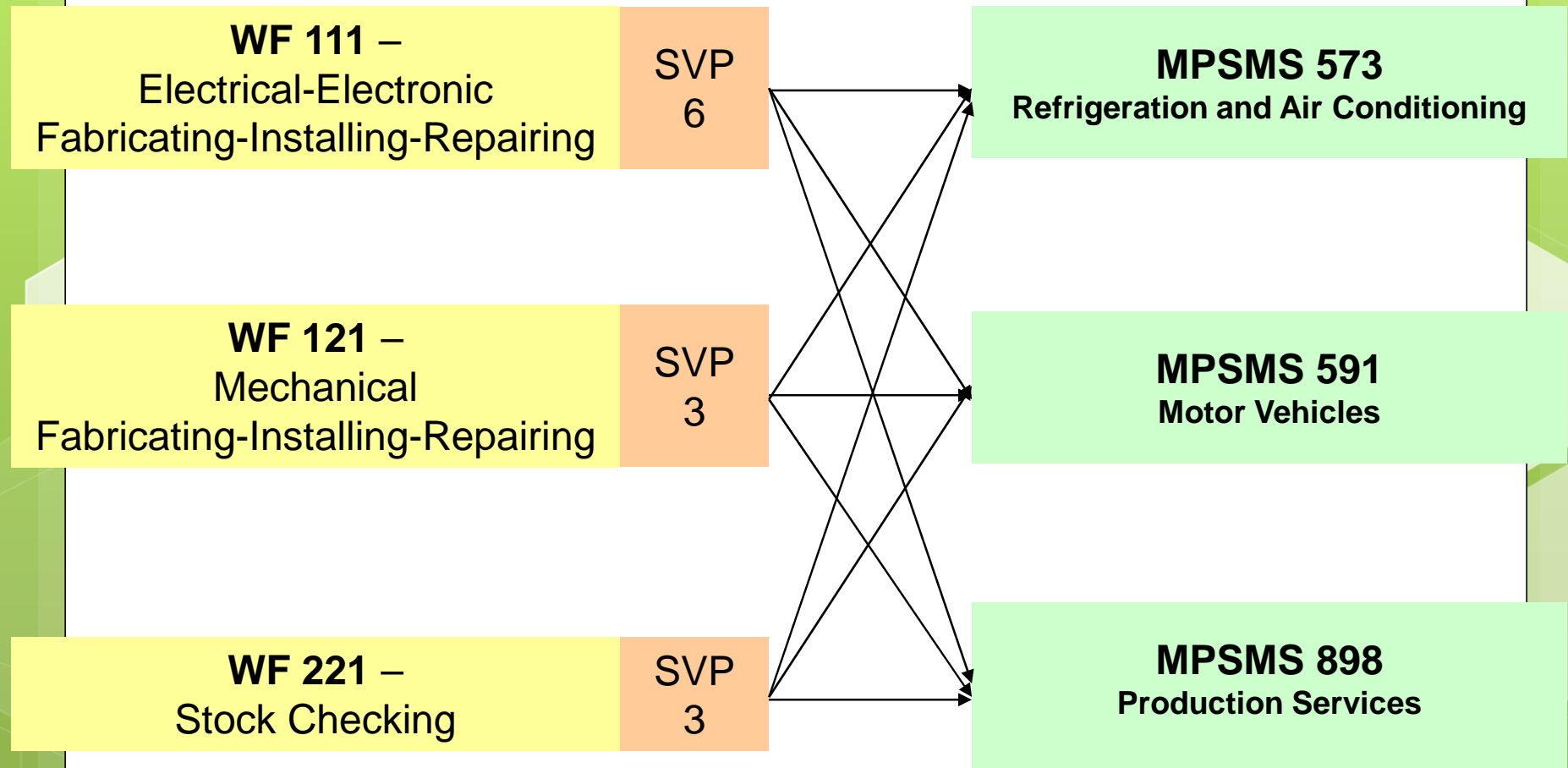
### **MPSMS**

“... basic Materials processed, .... final Products made, ...  
Subject Matter or data dealt with, Services rendered.”  
*RHAJ* p. 5-1

## Bill Sample - Work History



## Transferable Skills Analysis Classic Model



## Combination Work Fields



COMBINATION WORK FIELDS						U.S. Department of Labor (1991). <i>The Revised Handbook for Analyzing Jobs.</i> Washington, DC: US Government Printing Office. Page 4-7.		
Machining	Upholstering	Structural Fabricating- Installing- Repairing	Electrical- Electronic Fabricating- Installing- Repairing	Mechanical Fabricating- Installing- Repairing	Processing- Compounding			
057	101	102	111	121	147	WF	Title	
051	054	051	051	051		051	Abrading	
052		052	053	052		052	Chipping	
053		053		053		053	Boring	
054		054		054		054	Shearing-Shaving	
055		055		055		055	Milling-Turning-Planing	
056		056		056		056	Sawing	
	063	061	061	061		061	Fitting-Folding	
		062	062	062		062	Fastening	
		063	063	063		063	Gluing-Laminating	
	071	071	071	071		071	Bolting-Screwing	
	072	072	072	072		072	Nailing	
			073	073		073	Riveting	
		081	081	081		081	Welding	
		082	082	082		082	Flame Cutting-Arc Cutting-Beam Cutting	
		083	083	083		083	Soldering-Brazing	
		091				091	Masoning	
		092				092	Laying-Covering	
		094				094	Caulking	
		095				095	Paving	
				134	131	131	Melting	
					133	133	Heat Conditioning	
					136	134	Pressing-Forging	
						136	Molding	
					141	141	Baking-Drying	
					143	143	Mixing	
					144	144	Distilling	
					145	145	Separating	
		151		151	152	151	Immersing-Coating	
		153		153		152	Saturating	
						153	Brushing-Spraying	
		163				163	Winding	
	171	171		171		171	Sewing-Tailoring	
6	5	22	9	19	7	Total N		

Per 1972 Handbook for Analyzing Jobs, p. 111 - Example of definition of WF 102 - Structural Fabricating-Installing-Repairing:

"Fabricating and installing-repairing structures or objects, the elements of which are static (i.e. involve mechanisms no more complex than hinges, links, or catches) and may require shaping by any combination of *Abrading, Bolting-Screwing, Boring, Brushing-Spraying, ....* Jobs involving only one of these work fields are listed thereunder. Distinguish from *Mechanical Fabricating-Installing-Repairing* and *Machining*."

**Bill Sample  
Combo  
Work Fields**



## SKILL TRAN - Handling of Multiple Combination Work Fields

637.664-010 HVAC Helper		620.684-014	Auto Mechanic Helper		
Electrical- Electronic Fabricating- Installing- Repairing	6	3	Mechanical Fabricating- Installing- Repairing		
<b>111</b>	<b>SVP</b>	<b>SVP</b>	<b>121</b>	<b>WF</b>	<b>Title</b>
051	6	3	051	051	Abrading
		3	052	052	Chipping
053	6	3	053	053	Boring
		3	054	054	Shearing-Shaving
		3	055	055	Milling-Turning-Planing
		3	056	056	Sawing
061	6	3	061	061	Fitting-Folding
		3	062	062	Fastening
		3	063	063	Gluing-Laminating
071	6	3	071	071	Bolting-Screwing
072	6	3	072	072	Nailing
073	6	3	073	073	Riveting
081	6	3	081	081	Welding
		3	082	082	Flame Cutting-Arc-Butting-Beam Cutting
083	6	3	083	083	Soldering-Brazing
		3	134	134	Pressing-Forging
		3	151	151	Immersing-Coating
		3	153	153	Brushing-Spraying
163	6			163	Winding
		3	171	171	Sewing-Tailoring

Skill TRAN always retains 3-Digit Combo Work Fields

# SkillTRAN

**SkillTRAN**  
**TSA Process**  
**with Combo WF**

## **WF 111 –** **Electrical-Electronic** **Fabricating-Installing-Repairing**

Abrading – 051  
Boring – 053  
Fitting-Folding – 061  
Bolting-Screwing – 071  
Nailing – 072  
Riveting – 073  
Welding – 081  
Soldering-Brazing – 083  
Winding – 163

**SVP**  
**6**

## **WF 121 –** **Mechanical** **Fabricating-Installing-Repairing**

Chipping – 052  
Shearing-Shaving – 054  
Milling-Turning-Planing – 055  
Sawing – 056  
Fastening – 062  
Gluing-Laminating – 063  
Flame Cutting-Arc Cutting-Beam Cutting – 082  
Pressing-Forging – 134  
Immersing-Coating – 151  
Brushing-Spraying – 153  
Sewing-Tailoring – 171

**SVP**  
**3**

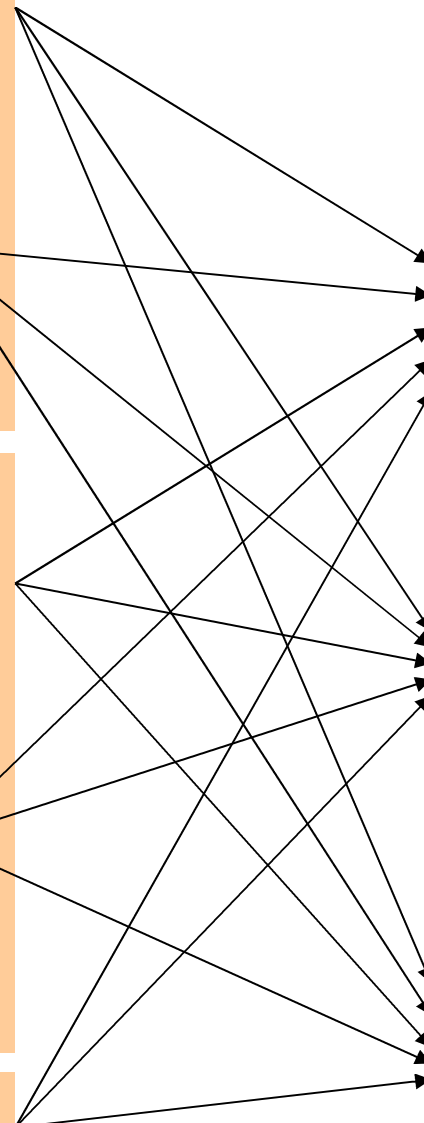
## **WF 221 –** **Stock Checking**

**SVP**  
**3**

**MPSMS 573**  
**Refrigeration and Air**  
**Conditioning**

**MPSMS 591**  
**Motor Vehicles**

**MPSMS 898**  
**Production Services**





# Skill *TRAN* Post-Injury TSA Results

Skilled / Semi-Skilled		S V P	T S A
221.387-026	Expediter Clerk	3	1
222.367-070	Expediter, Service Order	3	1
229.587-014	Quality-Control Clerk	3	1
815.380-010	Welder Setter, Electron-Bea	6	2
724.684-018	Armature Winder, Repair	4	2
813.685-010	Brazer, Controlled Atmosph	4	2
710.381-046	Tester, Electronic Scale	6	3
701.684-030	Tool Filer	5	3
709.382-010	Sewing-Machine Tester	5	3
729.381-014	Pin-Game-Machine Inspectr	5	3
770.381-018	Diamond Driller	5	3
770.381-022	Diamond-Die Polisher	5	3
692.662-022	Wire-Wrapping-Machine Op	4	3
710.684-010	Agate Setter	4	3
222.587-026	Laboratory Clerk	3	3
637.684-014	Quality-Control Technician	3	3
706.684-038	Bearing-Ring Assembler	3	3
706.685-010	Type-Soldering-Machine Te	3	3
706.687-034	Roller-Bearing Inspector	3	3
709.684-082	Stab Setter and Driller	3	3
723.684-010	Assembler	3	3
724.685-010	Element Winding Machine	3	3
729.384-026	Electrical Assembler	3	3
731.684-010	Coin-Machine Assembler	3	3
739.684-134	Needle-Board Repairer	3	3
617.682-018	Hobbing-Press Operator	4	3
649.685-090	Perforating-Machine Operat	4	3
699.362-010	Automated Cutting Machine	4	3
709.684-090	Tube Bender, Hand I	4	3
829.684-010	Battery Inspector	4	3
706.587-010	Cleaner-Touch-Up Worker	3	3

N = 31

Unskilled (SVP =2)		S V P	T S A
221.587-018	Odd-Piece Checker	2	1
222.567-018	Slot-Tag Inserter	2	1
222.687-010	Checker I	2	1
222.687-022	Routing Clerk	2	1
620.684-018	Brake Adjuster	2	1
640.565-010	Paper Cutter	2	1
209.687-026	Mail Clerk	2	3
239.567-010	Office Helper	2	3
290.477-010	Coupon-Redemption Clerk	2	3
654.687-014	Pager	2	3
689.687-034	Drop-Wire Builder	2	3
689.687-054	Pegger, Dobby Looms	2	3
689.687-078	Threader	2	3
731.687-010	Assembler	2	3
809.687-026	Mold Preparer	2	3
806.687-010	Assembler, Bicycle II	2	3
689.587-010	Numberer and Wirer	2	3
703.684-018	Template Cutter	2	3
706.684-042	Bench Assembler	2	3
706.684-102	Vending-Machine Assembl	2	3
706.687-010	Assembler, Production	2	3
739.687-154	Polishing-Pad Mounter	2	3
208.685-014	Folding-Machine Operator	2	3
208.685-018	Inserting-Machine Operator	2	3
208.685-022	Microfilm Mounter	2	3
208.685-026	Sealing-and-Canceling Mac	2	3
249.587-014	Cutter and Paster, Press C	2	3
249.587-018	Document Preparer, Microfil	2	3
922.687-018	Bobbin Sorter	2	3
976.487-010	Photograph Finisher	2	3
976.684-026	Splicer	2	3
976.685-022	Mounter, Automatic	2	3

N = 32



## Result Comparison

	SVP > 2	SVP=2	Total
LifeStep =	14	+ 12	= 26
OASYS =	38	+ 24	= 62
SkillTRAN =	31	+ 32	= 63

MTSP =	45	+ 11	= 56
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## MTSP

Lifestyle		S V P	T S A
221.387-026	Expediter Clerk	3	1
222.367-070	Expediter, Service Order	3	1
229.587-014	Quality-Control Clerk	3	1
710.381-046	Tester, Electronic Scale	6	3
729.381-014	Pin-Game-Machine Inspect	5	3
692.662-022	Wire-Wrapping-Machine Op	4	3
222.587-026	Laboratory Clerk	3	3
637.684-014	Quality-Control Technician	3	3
729.384-026	Electrical Assembler	3	4
865.684-022	Refrigerator Glazier	4	2
710.381-014	Balancer, Scale	6	4
710.381-010	Assembler II	5	4
706.684-094	Subassembler	4	4
710.584-010	Scroll Assembler	3	4

**N = 14**

$N = 14$

		S	T
		V	P
		A	A
OASYS			
221.387-026	Expediter Clerk	3	1
222.367-070	Expediter, Service Order	3	1
229.587-014	Quality-Control Clerk	3	1
710.381-046	Tester, Electronic Scale	6	2
701.684-030	Tool Filer	5	2
709.382-010	Sewing-Machine Tester	5	2
729.381-014	Pin-Game-Machine Inspector	5	2
770.381-018	Diamond Driller	5	2
770.381-022	Diamond-Die Polisher	5	2
692.662-022	Wire-Wrapping-Machine Operator	4	2
710.684-010	Agate Setter	4	2
222.587-026	Laboratory Clerk	3	2
637.684-014	Quality-Control Technician	3	2
706.684-038	Bearing-Ring Assembler	3	2
706.685-010	Type-Setting-Machine Teller	3	2
706.687-034	Roller-Bearing Inspector	3	2
709.684-082	Stab Setter and Driller	3	2
723.684-010	Assembler	3	2
724.685-010	Element Winding Machine	3	2
729.384-026	Electrical Assembler	3	2
731.684-010	Coin-Machine Assembler	3	2
739.684-134	Needle-Board Repairer	3	2
866.684-022	Refrigerator Glazier	4	3
007.362-010	Nesting Operator, Numerical Control	6	4
626.381-018	Hydraulic-Press Servicer	6	4
710.381-014	Balance, Scale	6	4
626.381-010	Case-Finishing-Machine Adjuster	5	4
683.381-010	Chain Builder, Loom Control	5	4
706.381-014	Assembly Inspector	5	4
710.381-010	Assembler II	5	4
630.684-014	Belt Repairer	4	4
632.380-010	Inspecting-Machine Adjuster	4	4
651.384-010	Platen Builder-Up	4	4
706.684-094	Subassembler	4	4
628.684-038	Wire Repairer	3	4
709.484-010	Silk-Screen-Frame Assembler	3	4
710.584-010	Scroll Assembler	3	4
739.684-150	Screen Maker	3	4
N = 38			

N = 38

SkillTRAN		S	T
		V	S
		P	A
221.387-026	Expediter Clerk	3	1
222.367-070	Expediter, Service Order	3	1
229.587-014	Quality-Control Clerk	3	1
815.380-010	Welder Setter, Electron-Bes	6	2
724.684-018	Armature Winder, Repair	4	2
813.685-010	Brazer, Controlled Atmosph	4	2
710.381-046	Tester, Electronic Scale	6	3
701.684-030	Tool Filer	5	3
709.382-010	Sewing-Machine Tester	5	3
729.381-014	Pin-Game-Machine Inspect	5	3
770.381-018	Diamond Driller	5	3
770.381-022	Diamond-Die Polisher	5	3
692.662-022	Wire-Wrapping-Machine Op	4	3
710.684-010	Agate Setter	4	3
222.587-026	Laboratory Clerk	3	3
637.684-014	Quality-Control Technician	3	3
706.684-038	Bearing-Ring Assembler	3	3
706.685-010	Type-Soldering-Machine Ter	3	3
706.687-034	Roller-Bearing Inspector	3	3
709.684-082	Stab Setter and Driller	3	3
723.684-010	Assembler	3	3
724.685-010	Element Winding Machine	3	3
729.384-026	Electrical Assembler	3	3
731.684-010	Coin-Machine Assembler	3	3
739.684-134	Needle-Board Repairer	3	3
617.682-018	Hobbing-Press Operator	4	3
649.685-090	Perforating-Machine Operat	4	3
699.362-010	Automated Cutting Machine	4	3
708.684-090	Tube Bender, Hand I	4	3
829.684-010	Battery Inspector	4	3
706.587-010	Cleaner-Touch-Up Worker	3	3

N = 31

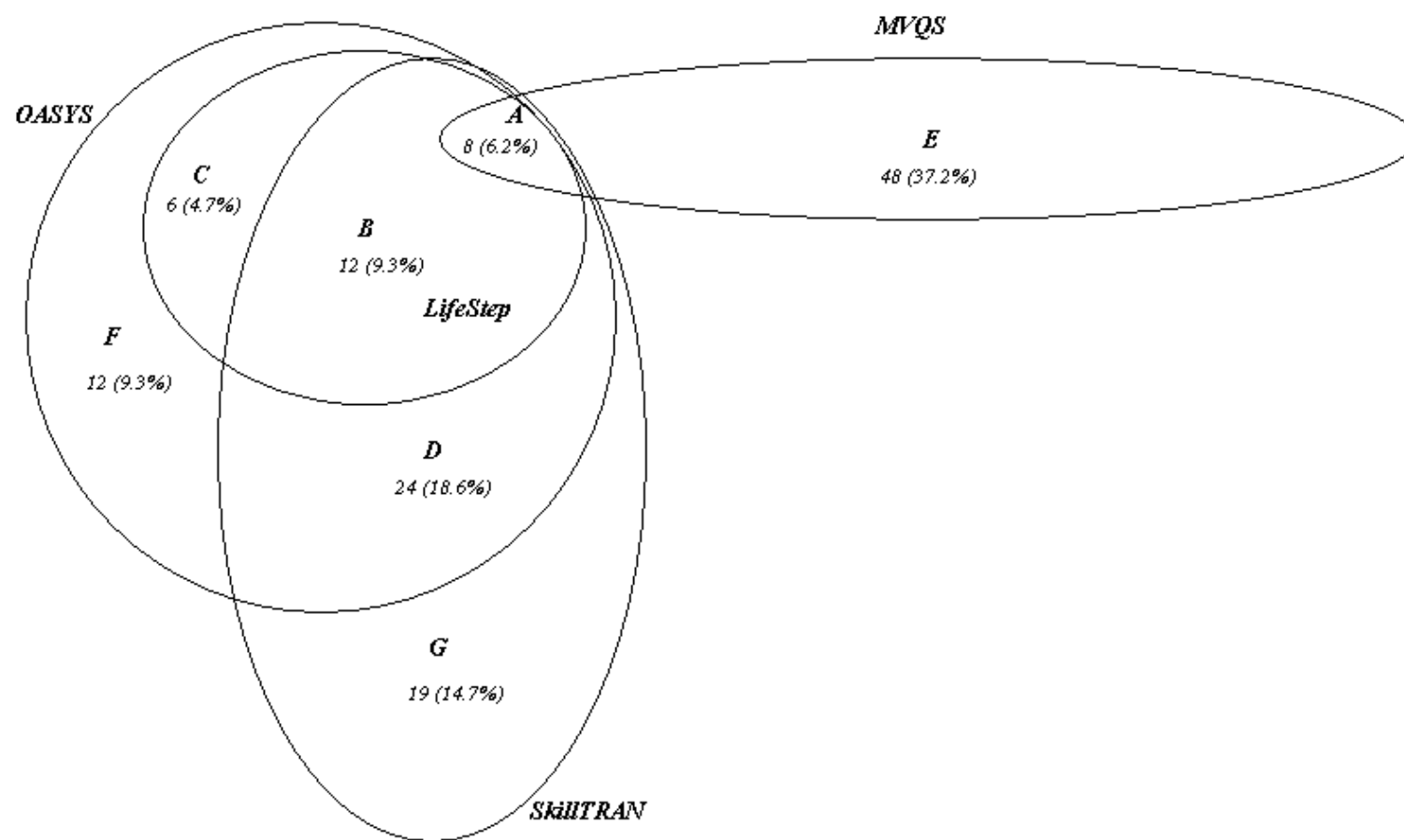
MTSP		S	T
		V	S
		P	A
221.387-026	Expediter Clerk	3	44
222.367-070	Expediter, Service Order	3	44
229.587-014	Quality-Control Clerk	3	80
222.587-026	Laboratory Clerk	3	45
222.387-034	Material Clerk	5	96
222.387-062	Storekeeper	5	88
222.387-014	Cut-File Clerk	4	86
229.367-014	Parts Lister	4	83
229.367-010	Field Recorder	4	82
222.487-014	Order Filler	3	72
219.387-030	Stock Control Clerk	5	71
710.684-034	Meter-Repairer Helper	4	70
222.387-054	Sorter-Pricer	5	68
219.387-018	Merchandise Distributor	3	67
219.387-026	Space-and-Storage Clerk	3	64

# N = 45

N = 45

N = 45

Table IV. Venn Diagram Comparing Results of Four Transferable Skill Analysis Applications



n = 129

Courtesy Patrick Dunn

# Interest-Based Search (GOE)

GOE Interest List		SVP
222.137-014	LINEN-ROOM SUPERVISOR	6
222.137-034	STOCK SUPERVISOR	6
222.137-046	TOOL-CRIB SUPERVISOR	6
222.167-010	METAL-CONTROL COORDINATOR	6
229.137-010	SACK-DEPARTMENT SUPERVISOR	6
849.137-010	DISPATCHER	6
952.367-010	LOAD CHECKER	6
222.387-062	STOREKEEPER	5
712.381-010	ARCH-SUPPORT TECHNICIAN	5
779.684-058	STONE REPAIRER	5
222.367-014	CUT-FILE CLERK	4
229.367-014	PARTS LISTER	4
630.684-014	BELT REPAIRER	4
710.684-034	METER-REPAIRER HELPER	4
732.684-102	ROLLER-SKATE REPAIRER	4
733.684-014	PEN-AND-PENCIL REPAIRER	4
074.382-010	PHARMACY TECHNICIAN	3
209.387-026	LIBRARY CLERK, TALKING BOOKS	3
221.587-030	TALLIER	3
222.367-030	FLOOR-SPACE ALLOCATOR	3
222.387-022	GUN-REPAIR CLERK	3
222.487-014	ORDER FILLER	3
222.587-026	LABORATORY CLERK	3
222.587-030	MAILER	3
222.587-032	MAILER APPRENTICE	3
349.680-010	TICKET-DISPENSER CHANGER	3
709.684-034	CIGARETTE-LIGHTER REPAIRER	3
221.587-018	ODD-PIECE CHECKER	2
222.387-074	SHIPPING-AND-RECEIVING WEIGH	2
620.684-018	BRAKE ADJUSTER	2
628.684-042	SPINDLE REPAIRER	2

Of these 31 occupations, notice that only two (marked in blue and both at the SVP = 2 level) are in common with either of the two preceding lists of occupations identified through the Skill *TRAN* approach to TSA.

**No occupations identified as transferable (i.e. SVP > 2) using the Skill *TRAN* approach for TSA are on this interest-based list.**

That the GOE-based list is vastly different from the WF/MPSMS-based list is continuing evidence of the strong independence of each of these constructs – i.e. GOE is very different from WF and MPSMS.

This case provides continuing support for earlier analysis done by author Jeff Truthan, citation below.

Truthan, J.A. (1989). Job Matching Systems: One difference is the data. In R. Fry (Ed.), The Issues Papers: Fourth National Forum on Issues in Vocational Assessment (pp 133-139). Menomonee, WI: University of Wisconsin-Stout, Materials Development Center.

## TSA Methods TakeAway

- Not all software programs search the same way.
- Each program can generate a different set of results given the same RFC.
- There can be substantial variation between similar methods.
- Search strategy matters !
- How you define “skill” / “skills analysis” may vary with the venue.
- Your search strategies should match the needs of your client and referral source.

## SkillTRAN – OASYS TSA Searches

### TRANSFER

Same  
3-digit  
Match

Similar  
2-digit  
Match

<u>SkillTRAN</u>	<u>WORK</u>	<u>LEVEL</u>	<u>MPSMS</u>	<u>OASYS</u>
Directly	Same	1	Same	Closest
	Similar	2	Same	Good
Closely	Same	3	Similar	Good
Generally	Similar	4	Similar	Good
	Same	5	Not Used	Fair
	Similar	6	Not Used	Fair
	Not Used	7	Same	Fair
	Not Used	8	Similar	Fair
Within Basic Capacities	Not Used	9	Not Used	Potential

### TRAINING

Minimal



Minor

Moderate



Substantial

# Questions & Answers

## What's Coming

- 1991 – Last formal revision to the DOT
- 1993 - APDOT
- 1998 – Last changes to the DOT errata +
- 1998 – O\*NET 98 Introduced
- 2000 - 2001 – IOTF
- 2004<sup>ish</sup> (?) – Consider DOT “updated” by others
- 2008 – 2012 - OIDAP
- 2012 ff – BLS – National Compensation Survey (NCS) – Occupational Requirements Survey  
<http://bls.gov/ors>
- [http://www.bls.gov/ncs/ors/ors\\_info\\_sheet\\_2013.pdf](http://www.bls.gov/ncs/ors/ors_info_sheet_2013.pdf)



## Transition From DOT to O\*NET

- OIDAP discontinued
- BLS – NCS – SSA Interagency Agreement
- Push to move to all O\*NET
- Collect more, much better PD factors
- Collect Mental-Cognitive Factors
- Timeline unknown for actual new data

# Challenge of Transition

- Data being collected at the SOC/O\*NET level
- Questions are being asked at HR/Small Biz Owner
- No direct observation or measurement
- Mental-Cognitive factors not yet disclosed
- Problem of data aggregation not yet addressed
- Some discussion of reporting by occ by NAICS
- Data will be reported with a range and SEM
- [ There is no mechanism to do a WF-SVP-MPSMS TSA ]
- Potential for degradation of ODAR Hearings
- No deliverable date set
- \$ 41M will be spent to determine if BLS can do it

**SkillTRAN**



**Thank You ...**

**“Live long and  
Prosper !”**

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