Global Information Access, Local Information Management

The Story of IRS Tax Map

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Infoloom

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March 8, 2010
XML SIG New York
Morgan Stanley
Outline

- why Tax Map started
- a Tax Map tour
- bottom-up
- symbols versus meanings
- Tax Map's process
- a topic map
- auditing Tax Map
- lessons learned
Why Tax Map Started

• IRS responding to criticism:
  – Information delivered to taxpayers lacked accuracy.
  – Telephone assistors had a hard time finding what was needed.
IRS Tax Map
Updated March 2, 2010

Use the Navigation Bar on the left to:

Search Tax Map By Topic

Search All Topics - Search all 5000 topics in Tax Map. Using as few words as possible, type in the word(s) that represent the topic you are looking for

Main Topics - Select a letter and browse through a list of frequently used topics (approximately 400) to start your search

Browse Tax Map Products

Frequently Asked Questions - Browse a list of tax law frequently asked questions arranged by category and subcategory

Forms and Publications - Browse a list of Tax Forms and Publications

Tax Topics - Browse more than 150 topics written for Tele-Tax Topics, the IRS telephone response system

Public version: http://taxmap.ntis.gov
Forms and Instructions

Form W-2 Wage and Tax Statement (Info Copy Only)
W-2 Instructions for Forms W-2 and W-3, Wage and Tax Statement and Transmittal of Wage and Tax Statements

Form W-2AS American Samoa Wage and Tax Statement (Info Copy Only)

Form W-2C Corrected Wage and Tax Statement (Info Copy Only)
W-2C Instructions for Forms W-2c and W-3c, Corrected Wage and Tax Statement and Transmittal of Corrected Wage and Tax Statements

Form W-2GU Guam Wage and Tax Statement (Info Copy Only)
## Related Publications

<table>
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<tr>
<th>Publication</th>
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<tr>
<td><strong>Publication 15</strong></td>
<td>Circular E, Employer's Tax Guide</td>
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<td>Employer's Tax Guide to Fringe Benefits</td>
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<td><strong>Publication 15-T</strong></td>
<td>New Wage Withholding and Advanced Earned Income Credit Payment Tables (for wages paid through December 2009)</td>
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<td><strong>Publication 505</strong></td>
<td>Tax Withholding and Estimated Tax</td>
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<td><strong>Publication 257</strong></td>
<td>Recording Book, Depreciation and Similar Intangible Assets</td>
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Wages and Other Compensation

5. Wages and Other Compensation. Wages subject to federal employment taxes generally include all pay you give...

Publication 15-A - Employer's Supplemental Tax Guide
(Supplement to Circular E, Employer's Tax Guide, Publication 15) - 5. Wages and Other Compensation

5. Wages and Other Compensation. Publication 15 (Circular E) provides a general discussion of taxable wages....

Publication 17 - Your Federal Income Tax (For Individuals)
- Tax Withholding and Estimated Tax

Salaries and Wages. Income tax is withheld from the pay of most employees. Your pay includes your regular...
Frequently Asked Questions

FAQ - Interest/Dividends/Other Types of Income > Ministers' Compensation & Housing Allowance

A minister receives a salary plus a housing allowance. Is the housing allowance income? Where does the minister...

FAQ - Small Business/Self-Employed/Other Business > Entities: Sole Proprietor, Partnership, Limited Liability Company/Partnership (LLC/LLP), Corporation, Subchapter S Corporation

Are partners considered employees of a partnership or are they self-employed? Partners of a partnership are...

TeleTax

TeleTax 401

Wages and Salaries. 401Wages, salaries, and tips received by an employee for performing services for an employer...
Forms and Instructions

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Form W-2GU Guam Wage and Tax Statement (Info Copy Only)
Publications

Links Inside Publications

Publication 17 - Your Federal Income Tax (For Individuals)
  - Credit for Withholding and Estimated Tax for 2009
    Form W-2. Your employer is required to provide or send Form W-2 to you no later than February 1, 2010. You...

Publication 505 - Tax Withholding and Estimated Tax -
  Credit for Withholding and Estimated Tax for 2009
    Form W-2. Your employer is required to provide or send Form W-2 to you no later than February 1, 2010. You...

Frequently Asked Questions

FAQ - IRS Procedures > W-2 - Additional, Incorrect, Lost, Non-receipt, Omitted
  May an employer provide me my Form W-2 electronically? Yes, an employer may furnish your (PDF) electronically...

FAQ - IRS Procedures > W-2 - Additional, Incorrect, Lost, Non-receipt, Omitted
  I received an incorrect W-2 form. I can't get my former employer to issue a corrected W-2? What should I do?...
5. Wages and Other Compensation. Wages subject to federal employment taxes generally include all pay you give...

5. Wages and Other Compensation. Publication 15 (Circular E) provides a general discussion of taxable wages....

Salaries and Wages. Income tax is withheld from the pay of most employees. Your pay includes your regular...
5. Wages and Other Compensation  (p10)

Wages subject to federal employment taxes generally include all pay you give to an employee for services performed. The pay may be in cash or in other forms. It includes salaries, vacation allowances, bonuses, commissions, and fringe benefits. It does not matter how you measure or make the payments. Amounts an employer pays as a bonus for signing or ratifying a contract in connection with the establishment of an employer-employee relationship and an amount paid to an employee for cancellation of an employment contract and relinquishment of contract rights are wages subject to social security, Medicare, and federal unemployment taxes and income tax withholding. Also, compensation paid to a former employee for services performed while still employed is wages subject to employment taxes.

More information.  (p11)

See section 6 for a discussion of tips and section 7 for a discussion of supplemental wages. Also, see section 15 for exceptions to the general rules for wages. Publication
Chapter 5
Wages, Salaries, and Other Earnings  (p47)

What's New  (p47)

Differential wage payments.  (p47)
Payments made by an employer to an individual for any period during which the individual is an active duty member of the uniformed services are treated as wages. See the discussion under Miscellaneous Compensation.

Bicycle commuters.  (p47)
The qualified employer transportation fringe benefit is expanded to include any qualified bicycle commuting reimbursement. See Transportation under Fringe Benefits.
Wages and Salaries

Tele-Tax Topic 401

Wages, salaries, and tips received by an employee for performing services for an employer must be included in your gross income. Amounts withheld for taxes, including but not limited to income tax, social security and Medicare taxes are considered "received" and must be included in gross income in the year they are withheld. Generally, your employer's contribution to a qualified pension plan for you is not included in gross income at the time it is contributed. However, amounts withheld under certain salary reduction agreements with your employer may have to be included in gross income in the year they are withheld. See Publication 17, Chapter 5, Wages Salaries and Other Earnings, and Chapter 6, Tip Income, for specific information.

Your employer should provide a Form W-2 showing your total income and withholding. You
Compensation, Wage, Salary

Compensation
Salary
Wage

Forms and Instructions

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Related Topic Links
- 2. Special Wage Payments
- 501(c)(27) - State-Sponsored Workers' Compensation Reinsurance Organizations
- Adjustment, Withholding
- Advance commissions and other earnings.
- Back pay awards.
- Bonuses and awards.
- Child's wages used for own support
- Compensation for Labor or Personal Services
- Cumulative Wage Method
- Deferred Compensation Plan
- Differential wage payments.
- Earned Income
Publication 17 - Your Federal Income Tax (For Individuals) - Wages, Salaries, and Other Earnings

Back pay awards. Include in income amounts you are awarded in a settlement or judgment for back pay. These...
No workflow change

- IRS didn’t want to change anything in their production processes.
- Using Topic Maps would not require changing anything.
- So let's see why...
1 term, 1 subject

Travel
1 world, 1 term, 1 subject
4 worlds, 5 terms, 1 subject

- IRS Land
  - Travel

- Business Land
  - Going to a meeting

- Customs Land
  - Crossing a border

- Travel Industry Land
  - Taking a trip
  - Going from one place to another
1 topic

- Business Land
  - IRS Land
    - Going to a meeting
  - Travel Industry Land
    - Taking a trip
    - Going from one place to another
    - Crossing a border

- Customs Land
  - Travel
Every topic has 1 subject

- Business Land
- IRS Land

Going to a meeting

Travel

Travel Industry Land

Taking a trip

Going from one place to another

Customs Land

Crossing a border
## 3 Strategies

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<th>Full text Searching</th>
<th>Colocation by subject</th>
<th>Artificial Intelligence</th>
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<td>You need to know the vocabulary... And be lucky</td>
<td>Able to exploit the common sense and multiple community memberships of others</td>
<td>One world. Machine inferencing.</td>
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- **$0**
- **$$$$**

Michel Biezunski and Steve Newcomb
Tax Map’s Process

Editorial Product:

• Ingest the source materials emanating from diverse communities.
• Integrate the knowledge about each subject.
• Make renderings customized for various audiences.
Tax Map Rules Processing

• Containment
• Three words in common
• Patterns in topic names (e.g. “step x”) 
• Plural and singular nouns
Input of Tax Experts

• Annual workshops
• Handling new topic names
• Tweaking the results of Tax Map processing
Tax Map as a Topic Map

• XTM model served to design the initial model: Topics, Occurrences, Associations
• In Tax Map, some occurrences also are topics: publications, forms.
• Presentation blurs distinction between occurrences and associations.
Tax Map Auditing

• All processes acting on all topic names are recorded,
  including the names that are deleted, renamed, synonymized, or recognized as related to others.

• Based on the “Data Projection Model”
  – inspired by RDF (triples)
  – general “Semantic Microscope”
  – considers topic names as “accounts”
<table>
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<td>Allowance, Differential, and Other Special Pay</td>
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<td>Includible Compensation, Change</td>
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<td>Pay, Kinds</td>
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<td>Wage Paid, Graduated Withholding</td>
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Deleted Topic Names

266 < F13206
267 < F13217
268 < F13266
269 < F13582
270 < F13315
271 < F13614
272 < F13614SP
273 < IITEST
274 < Line 6 (Parent's Taxable Income)
   Step 2. Figuring a Tentative Tax at the Parent’s Tax Rate (Form 8615, Part II)
275 < Line 1 (Investment Income)
   Step 1. Figuring the Child’s Net Investment Income (Form 8615, Part I)
276 < Line 3
277 < Line 2 (Deductions)
1267 < Forms 1099
1268 < Fuel
1269 < F940 and 940-EZ Employer’s Annual Federal Unemployment Tax Returns
1270 < F940 and 940-EZ
1271 < FUTA
1272 < Federal Unemployment (FUTA) Tax-U.S. Virgin Islands Employers Only
1273 < F8027
1274 < F8027T
1275 < 2003 Withholding Rate Changes
1276 < 2007 Estimated Tax Worksheet
1277 < AEIC
1278 < ATF Form 5630.5
Lessons learned

- Reality is semantically messy.
  There are multiple perspectives on reality, and we'd better respect them.
- Nobody can prevent information from changing all the time. Accommodate change!
- Knowledge integration skills are different from domain specific skills – and sometimes the reflexes conflict.
- Perfection is not affordable and not necessary.
Questions?

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