US00RE45007E

(19) **United States**

(12) **Reissued Patent**

**Wyle**

(10) **Patent Number: US RE45,007 E**

(45) **Date of Reissued Patent: Jul. 8, 2014**

(54) **EFFICIENT WORK FLOW SYSTEM AND METHOD FOR PROCESSING TAXPAYER SOURCE DOCUMENTS**

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(73) Assignee: **SurePrep, LLC**, Newport Beach, CA (US)

(21) Appl. No.: **13/155,195**

(22) Filed: **Jun. 7, 2011**

**Related U.S. Patent Documents**

Reissue of:

(64) Patent No.: **7,769,646**
Issued: **Aug. 3, 2010**
Appl. No.: **11/766,019**
Filed: **Jun. 20, 2007**

(51) **Int. Cl.**

| | |
|---|---|
| ***G06Q 20/00*** | (2012.01) |
| ***G07F 19/00*** | (2006.01) |
| ***G06F 17/22*** | (2006.01) |
| ***G06Q 40/00*** | (2012.01) |
| *G06Q 40/02* | (2012.01) |

(52) **U.S. Cl.**

CPC ..... ***G06Q 40/103*** (2013.01); *G06Q 40/025* (2013.01)

USPC ..... **705/31**; 705/19; 705/28; 705/38

(58) **Field of Classification Search**

CPC ..... G06Q 40/103; G06Q 40/025

USPC ..... 705/28, 31, 38

See application file for complete search history.

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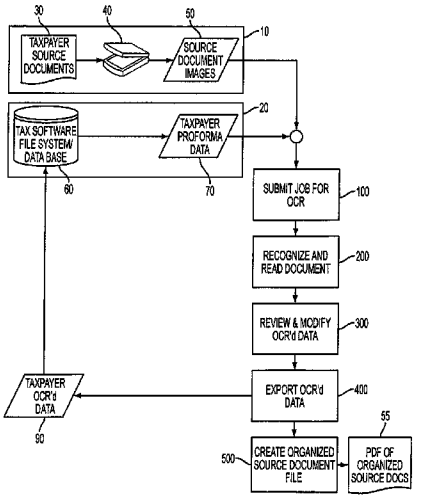
*Primary Examiner* — Olusegun Goyea

(74) *Attorney, Agent, or Firm* — Snell & Wilmer LLP

(57) **ABSTRACT**

A method for processing taxpayer source documents is disclosed. The method may include receiving proforma data and an electronic image of a taxpayer source document, determining a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document and using the proforma data, a database, and business rules to verify the type of the tax statement for the electronic image of the taxpayer source document. This can be done by searching for an identification code within the electronic image of the taxpayer source document to determine whether the identification code matches the proforma data. The method can also include extracting data from the electronic image of the taxpayer source document and determining if the extracted data from the electronic image of the taxpayer source document has an error. Once the data is extracted, the method can also include creating an electronic document that includes the extracted data.

**17 Claims, 13 Drawing Sheets**



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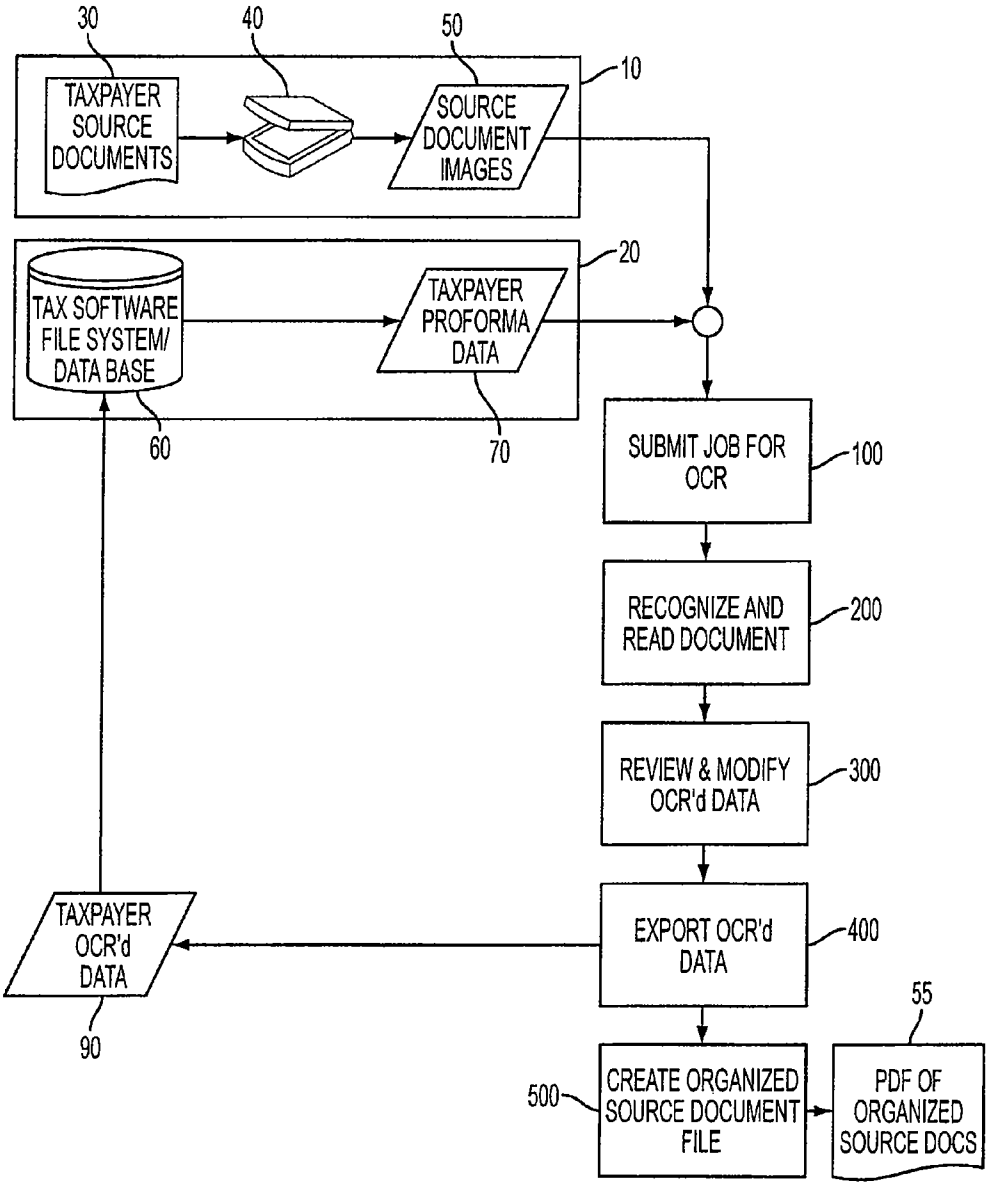

30
40
50
10
TAXPAYER SOURCE DOCUMENTS
SOURCE DOCUMENT IMAGES
20
TAX SOFTWARE FILE SYSTEM/ DATA BASE
TAXPAYER PROFORMA DATA
60
70
SUBMIT JOB FOR OCR
100
RECOGNIZE AND READ DOCUMENT
200
REVIEW & MODIFY OCR'd DATA
300
TAXPAYER OCR'd DATA
EXPORT OCR'd DATA
400
90
55
500
CREATE ORGANIZED SOURCE DOCUMENT FILE
PDF OF ORGANIZED SOURCE DOCS

FIG. 1

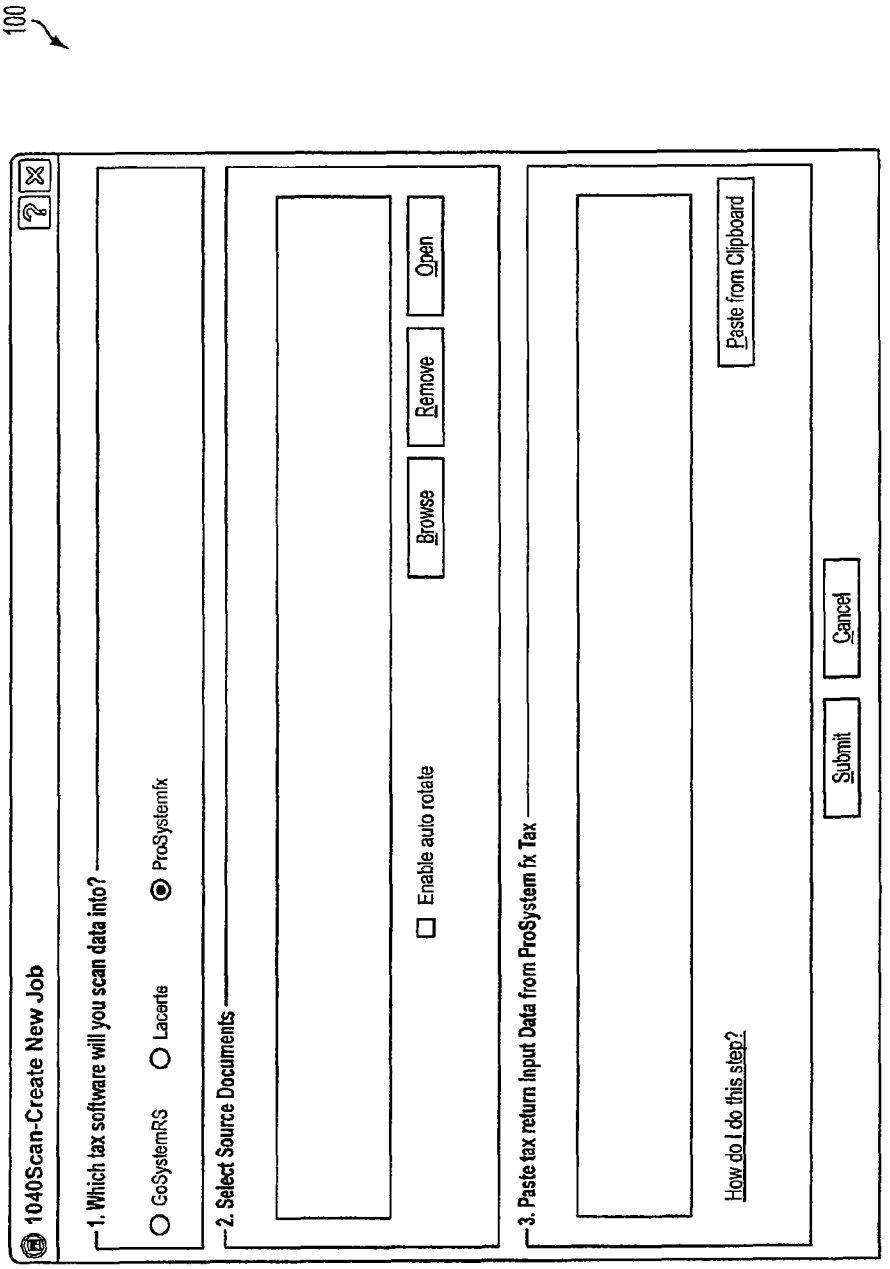
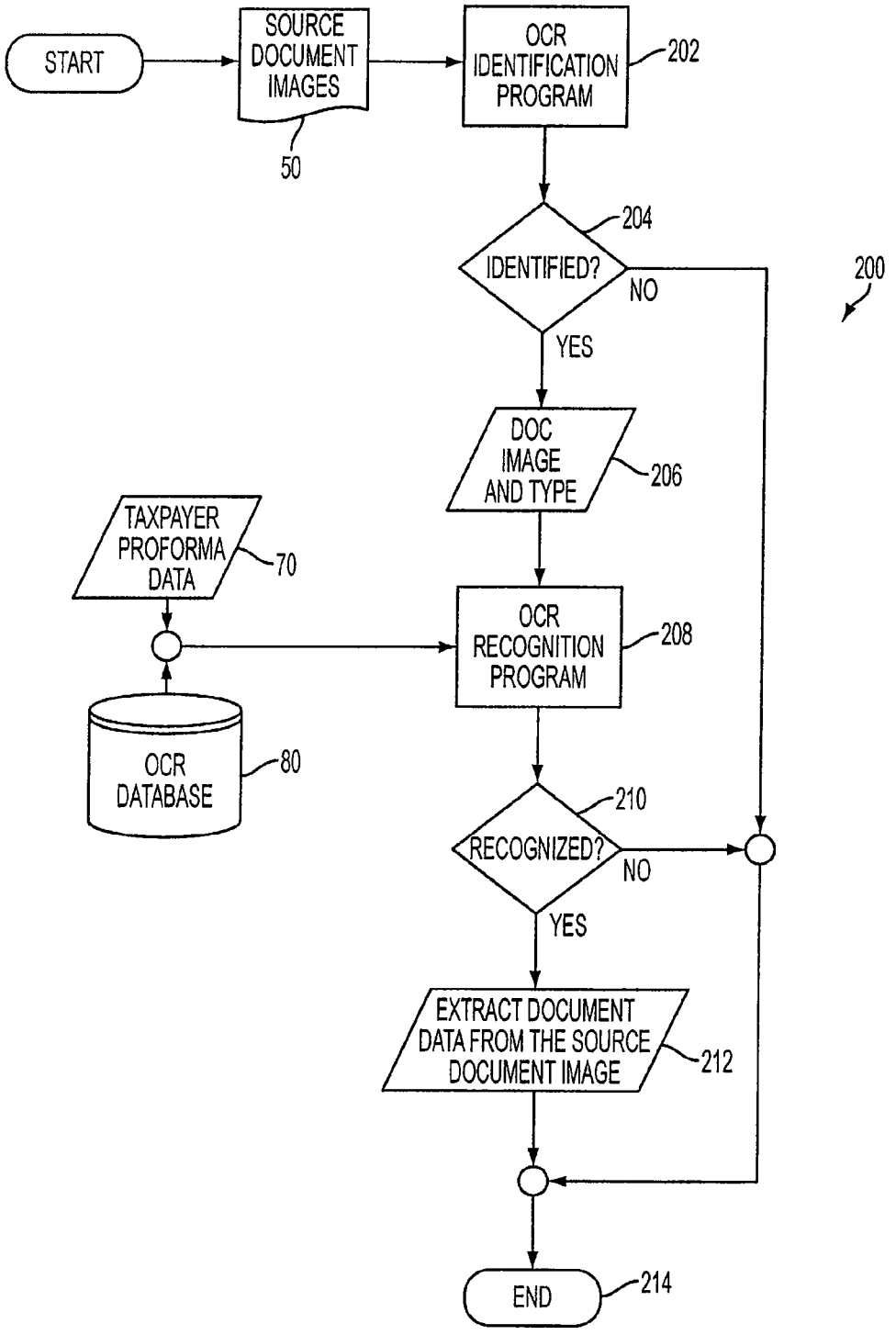

100
1040Scan-Create New Job
1. Which tax software will you scan data into?
GoSystemRS
Lacerte
ProSystemfx
2. Select Source Documents
Enable auto rotate
Browse
Remove
Open
3. Paste tax return input Data from ProSystem fx Tax
How do I do this step?
Paste from Clipboard
Submit
Cancel

FIG. 2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SOURCE DOCUMENT IMAGES
50
OCR IDENTIFICATION PROGRAM
202
IDENTIFIED?
204
NO
YES
200
DOC IMAGE AND TYPE
206
TAXPAYER PROFORMA DATA
70
OCR RECOGNITION PROGRAM
208
OCR DATABASE
80
RECOGNIZED?
210
NO
YES
EXTRACT DOCUMENT DATA FROM THE SOURCE DOCUMENT IMAGE
212
END
214

FIG. 3

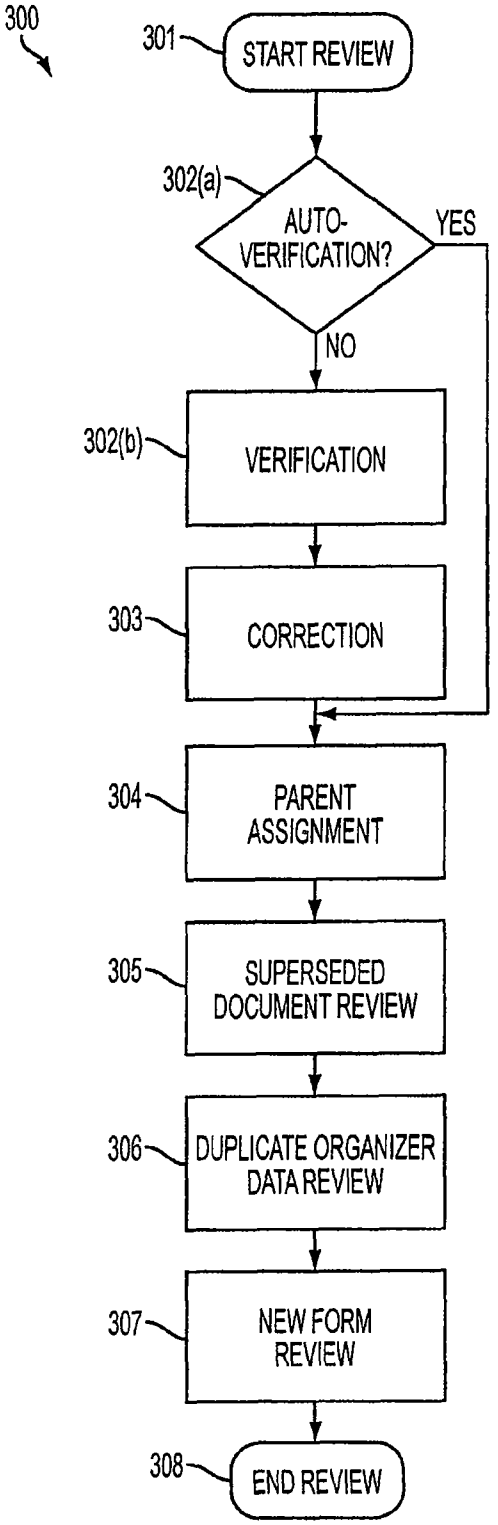

300
301
START REVIEW
302(a)
AUTO-VERIFICATION?
YES
NO
302(b)
VERIFICATION
303
CORRECTION
304
PARENT ASSIGNMENT
305
SUPERSEDED DOCUMENT REVIEW
306
DUPLICATE ORGANIZER DATA REVIEW
307
NEW FORM REVIEW
308
END REVIEW

FIG. 4

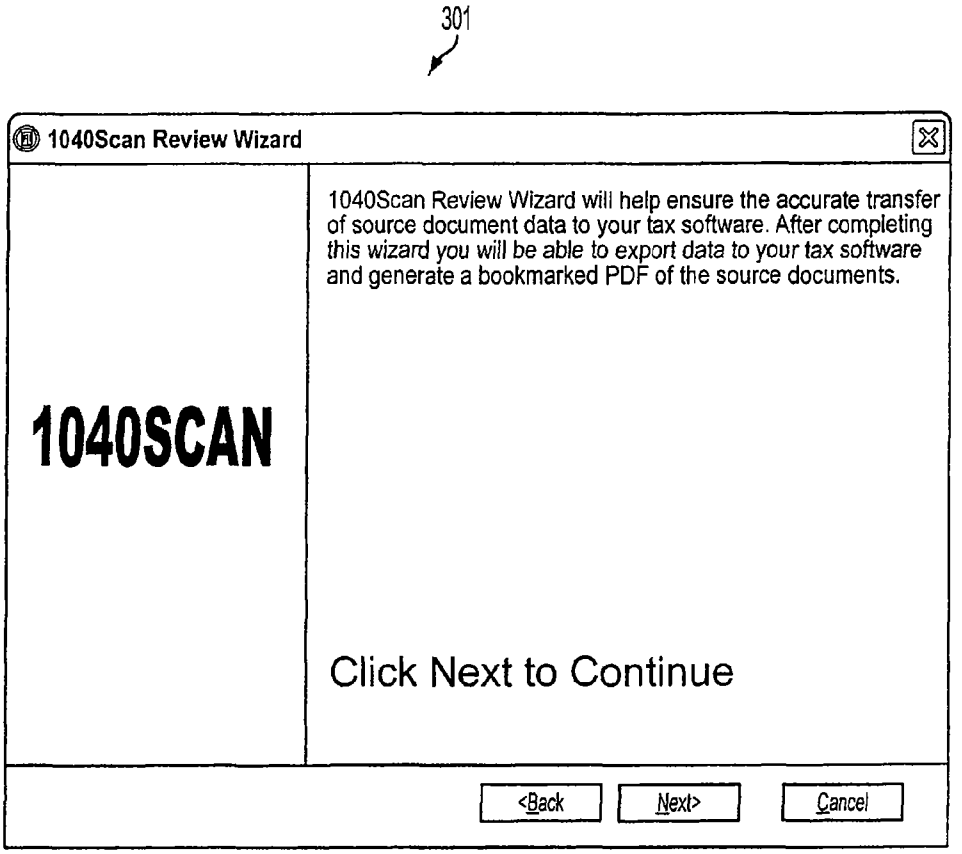

301
1040Scan Review Wizard
1040SCAN
1040Scan Review Wizard will help ensure the accurate transfer of source document data to your tax software. After completing this wizard you will be able to export data to your tax software and generate a bookmarked PDF of the source documents.
Click Next to Continue
<Back
Next>
Cancel

FIG. 5

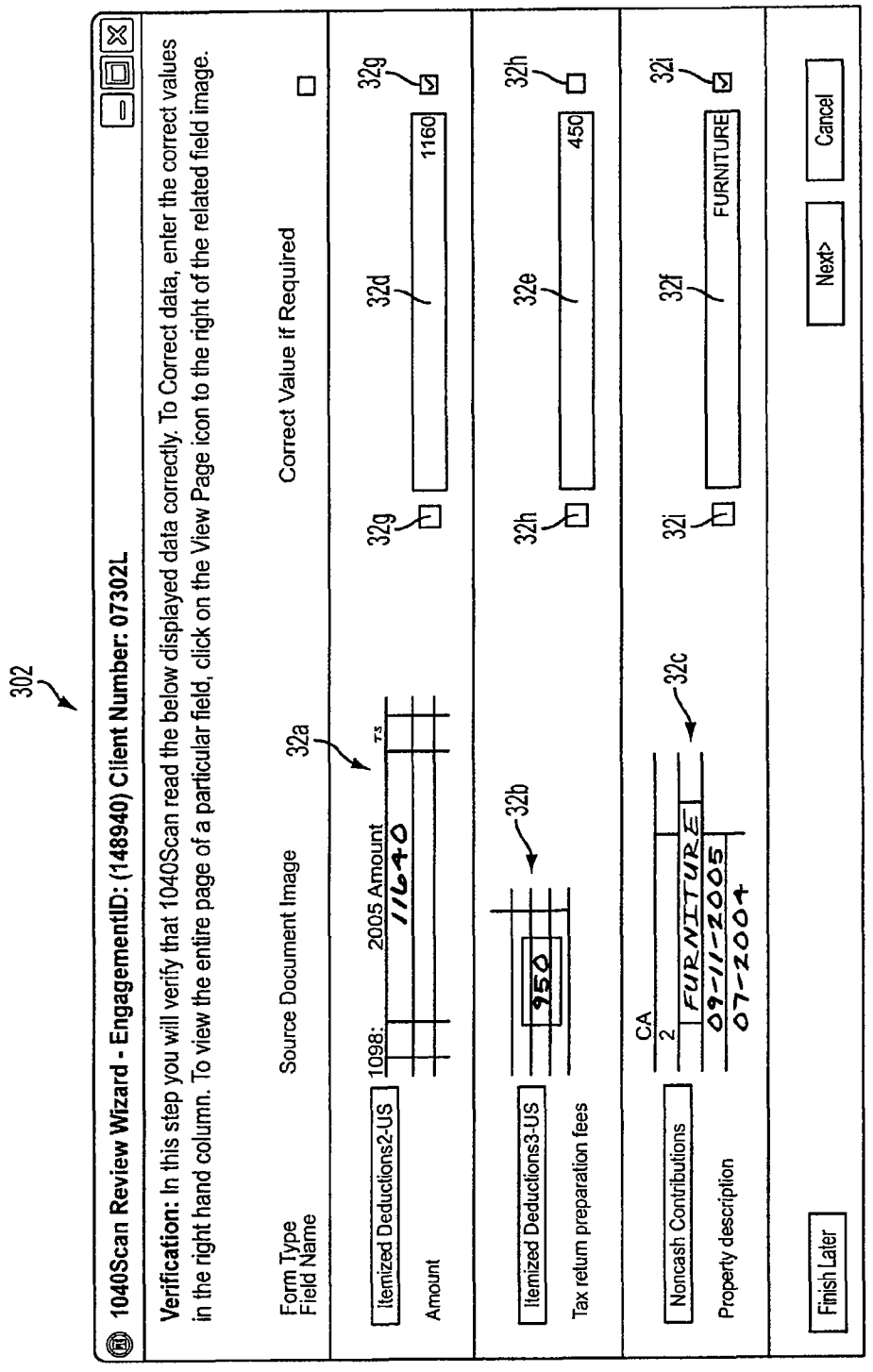

302
1040Scan Review Wizard - EngagementID: (148940) Client Number: 07302L
Verification: In this step you will verify that 1040Scan read the below displayed data correctly. To Correct data, enter the correct values in the right hand column. To view the entire page of a particular field, click on the View Page icon to the right of the related field image.
Form Type
Field Name
Source Document Image
32a
Correct Value if Required
Itemized Deductions2-US
1098:
2005 Amount
11640
32g
32d
32g
Amount
1160
Itemized Deductions3-US
32b
32h
32e
32h
Tax return preparation fees
950
450
CA
2
32c
Noncash Contributions
32i
32f
32i
FURNITURE
09-11-2005
07-2004
Property description
FURNITURE
Finish Later
Next>
Cancel

FIG. 6

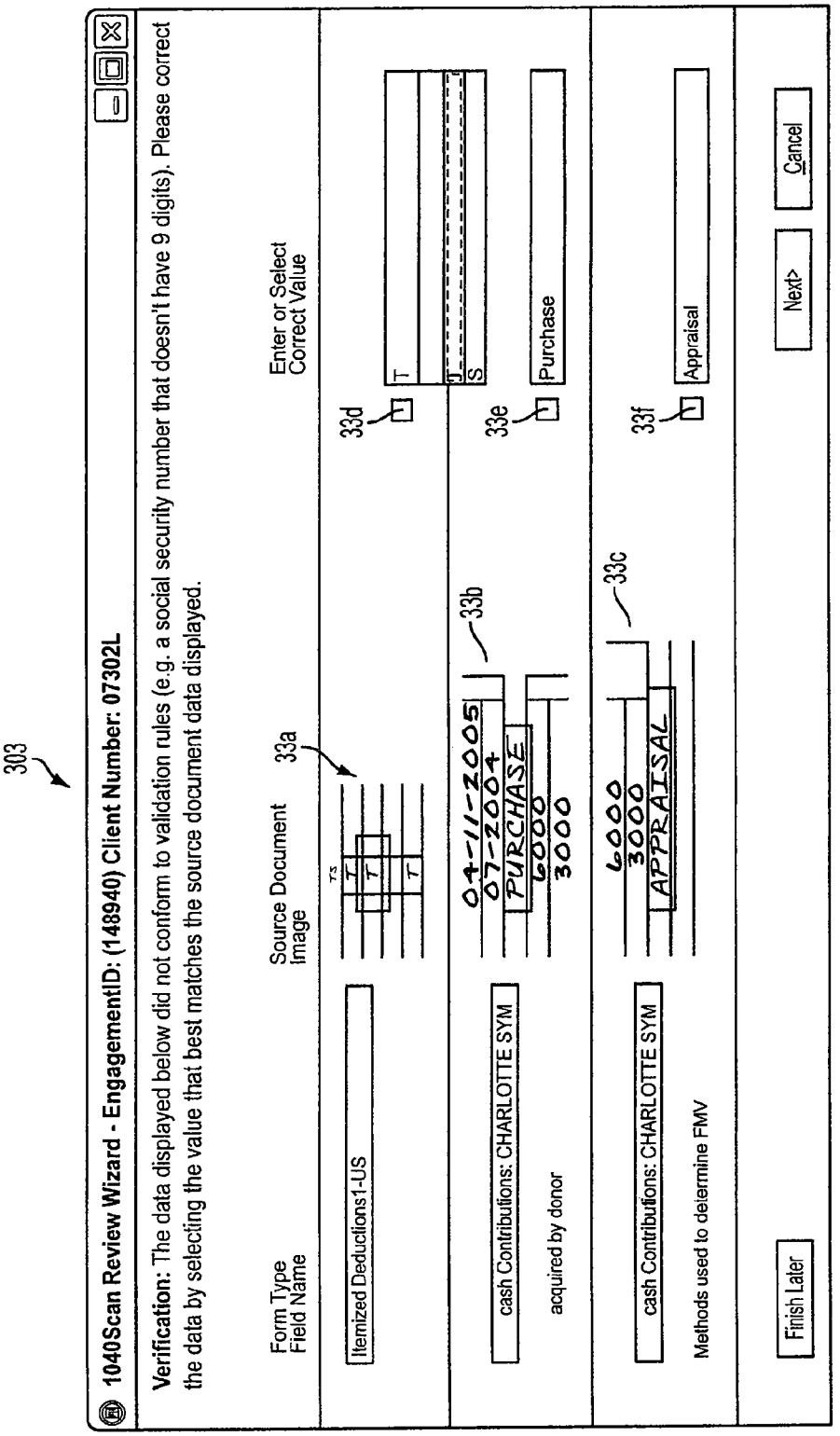

303
1040Scan Review Wizard - EngagementID: (148940) Client Number: 07302L
Verification: The data displayed below did not conform to validation rules (e.g. a social security number that doesn't have 9 digits). Please correct the data by selecting the value that best matches the source document data displayed.
Form Type
Field Name
Source Document Image
33a
Enter or Select Correct Value
Itemized Deductions1-US
33d
T
cash Contributions: CHARLOTTE SYM
04-11-2005
07-2004
PURCHASE
6000
3000
33b
33e
Purchase
acquired by donor
cash Contributions: CHARLOTTE SYM
6000
3000
APPRAISAL
33c
33f
Appraisal
Methods used to determine FMV
Finish Later
Next>
Cancel

FIG. 7

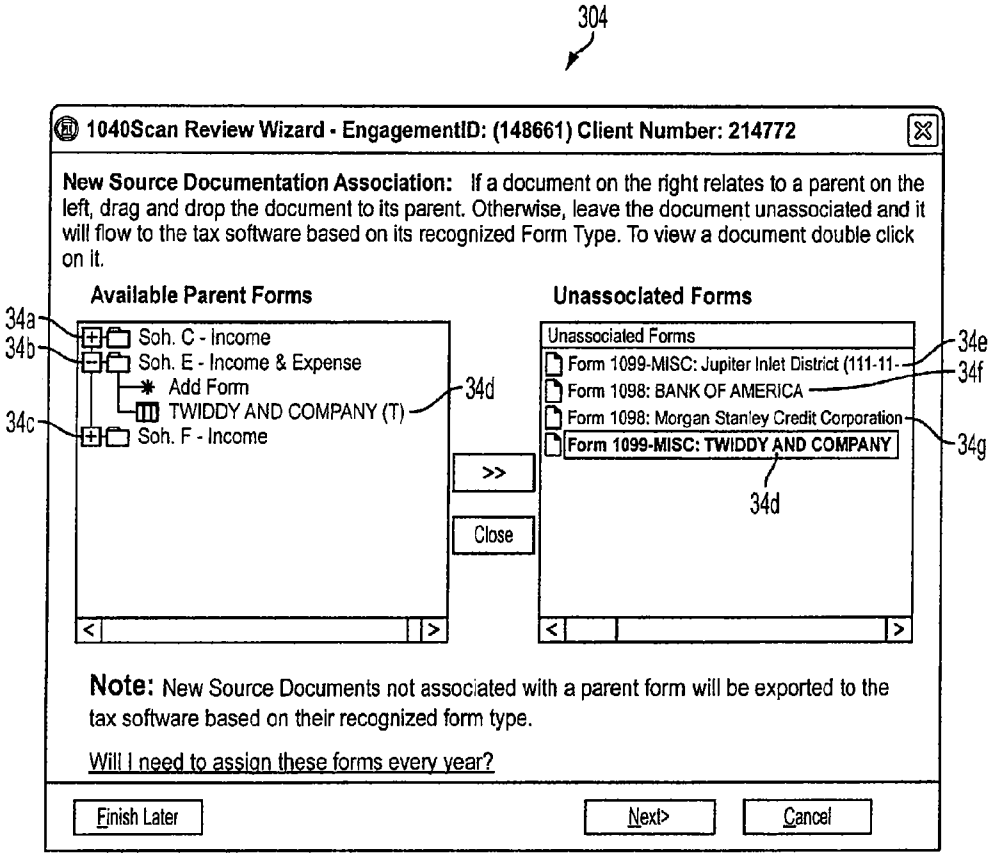
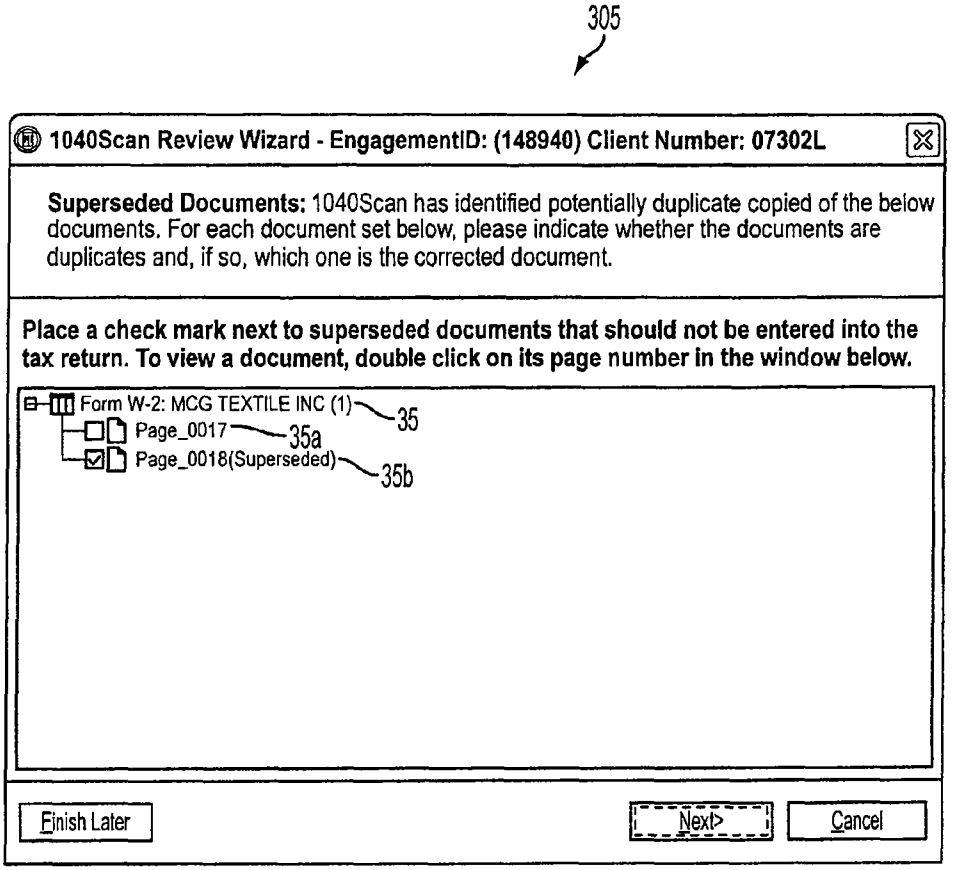

304
1040Scan Review Wizard - EngagementID: (148661) Client Number: 214772
New Source Documentation Association: If a document on the right relates to a parent on the left, drag and drop the document to its parent. Otherwise, leave the document unassociated and it will flow to the tax software based on its recognized Form Type. To view a document double click on it.
Available Parent Forms
Unassociated Forms
34a
34b
34c
34d
34e
34f
34g
Soh. C - Income
Soh. E - Income & Expense
Add Form
TWIDDY AND COMPANY (T)
Soh. F - Income
Unassociated Forms
Form 1099-MISC: Jupiter Inlet District (111-11-
Form 1098: BANK OF AMERICA
Form 1098: Morgan Stanley Credit Corporation
Form 1099-MISC: TWIDDY AND COMPANY
>>
Close
Note: New Source Documents not associated with a parent form will be exported to the tax software based on their recognized form type.
Will I need to assign these forms every year?
Finish Later
Next>
Cancel

FIG. 8


305
1040Scan Review Wizard - EngagementID: (148940) Client Number: 07302L
Superseded Documents: 1040Scan has identified potentially duplicate copied of the below documents. For each document set below, please indicate whether the documents are duplicates and, if so, which one is the corrected document.
Place a check mark next to superseded documents that should not be entered into the tax return. To view a document, double click on its page number in the window below.
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35
Page_0017
35a
Page_0018(Superseded)
35b
Finish Later
Next>
Cancel

FIG. 9

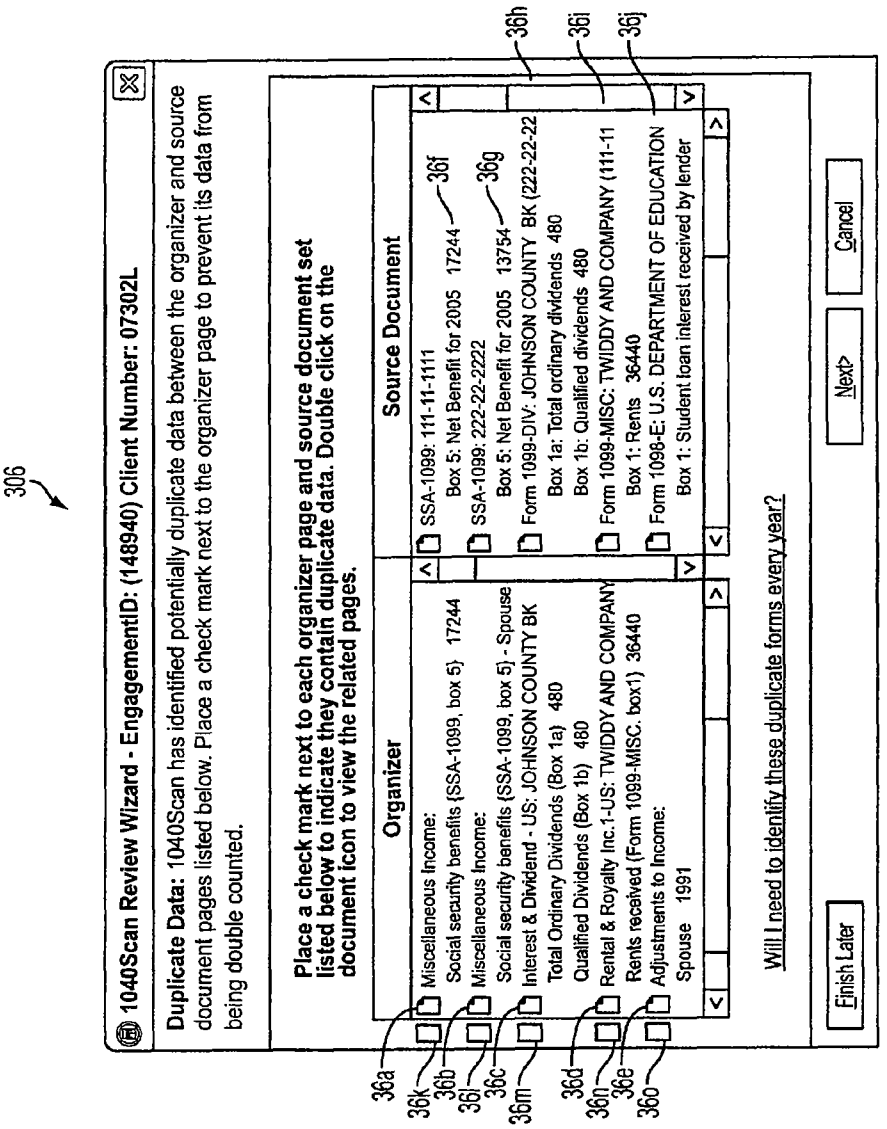
306
1040Scan Review Wizard - EngagementID: (148940) Client Number: 07302L
Duplicate Data: 1040Scan has identified potentially duplicate data between the organizer and source document pages listed below. Place a check mark next to the organizer page to prevent its data from being double counted.
Place a check mark next to each organizer page and source document set listed below to indicate they contain duplicate data. Double click on the document icon to view the related pages.
Organizer
Source Document
Miscellaneous Income:
Social security benefits (SSA-1099, box 5) 17244
Miscellaneous Income:
Social security benefits (SSA-1099, box 5) - Spouse
Interest & Dividend - US: JOHNSON COUNTY BK
Total Ordinary Dividends (Box 1a) 480
Qualified Dividends (Box 1b) 480
Rental & Royalty Inc.1-US: TWIDDY AND COMPANY
Rents received (Form 1099-MISC. box1) 36440
Adjustments to Income:
Spouse 1991
SSA-1099: 111-11-1111
Box 5: Net Benefit for 2005 17244
SSA-1099: 222-22-2222
Box 5: Net Benefit for 2005 13754
Form 1099-DIV: JOHNSON COUNTY BK (222-22-22
Box 1a: Total ordinary dividends 480
Box 1b: Qualified dividends 480
Form 1099-MISC: TWIDDY AND COMPANY (111-11
Box 1: Rents 36440
Form 1098-E: U.S. DEPARTMENT OF EDUCATION
Box 1: Student loan interest received by lender
Will I need to identify these duplicate forms every year?
Finish Later
Next>
Cancel
36a
36k
36b
36l
36c
36m
36d
36n
36e
36o
36f
36g
36h
36i
36j

FIG. 10

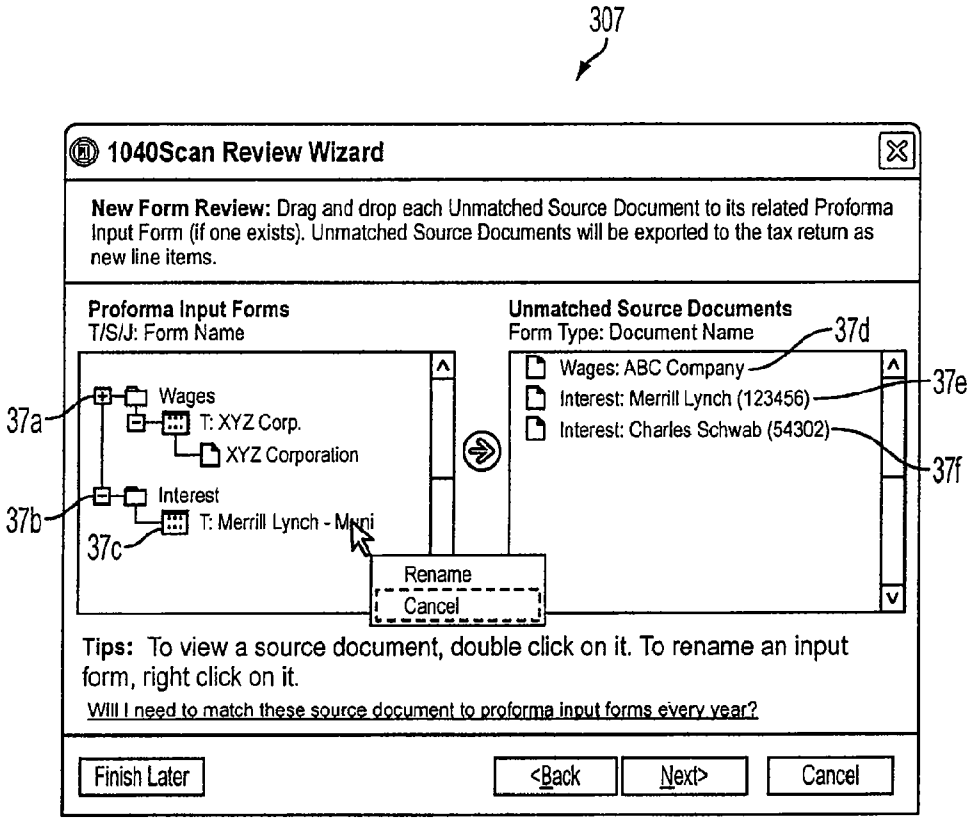
307
1040Scan Review Wizard
New Form Review: Drag and drop each Unmatched Source Document to its related Proforma Input Form (if one exists). Unmatched Source Documents will be exported to the tax return as new line items.
Proforma Input Forms
T/S/J: Form Name
Unmatched Source Documents
Form Type: Document Name
37d
Wages
T: XYZ Corp.
XYZ Corporation
Interest
T: Merrill Lynch - Mrni
Wages: ABC Company
Interest: Merrill Lynch (123456)
Interest: Charles Schwab (54302)
37a
37b
37c
37e
37f
Rename
Cancel
Tips: To view a source document, double click on it. To rename an input form, right click on it.
Will I need to match these source document to proforma input forms every year?
Finish Later
<Back
Next>
Cancel

FIG. 11

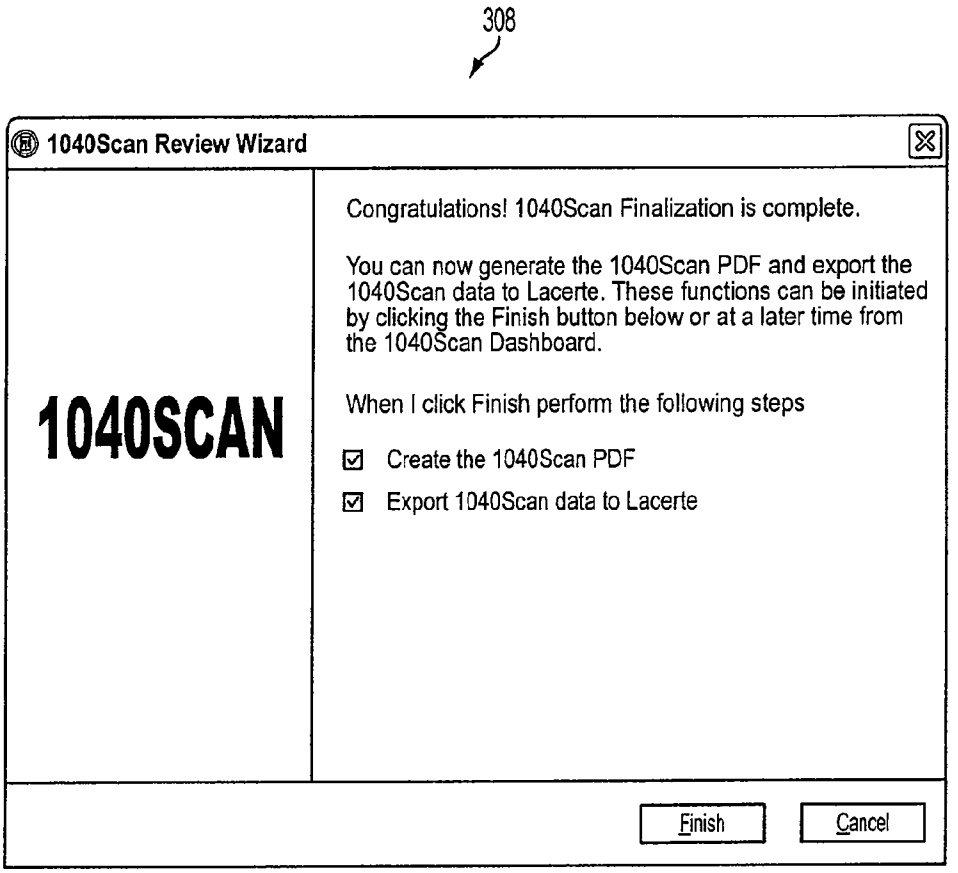
308
1040Scan Review Wizard
1040SCAN
Congratulations! 1040Scan Finalization is complete.
You can now generate the 1040Scan PDF and export the 1040Scan data to Lacerte. These functions can be initiated by clicking the Finish button below or at a later time from the 1040Scan Dashboard.
When I click Finish perform the following steps
Create the 1040Scan PDF
Export 1040Scan data to Lacerte
Finish
Cancel

FIG. 12

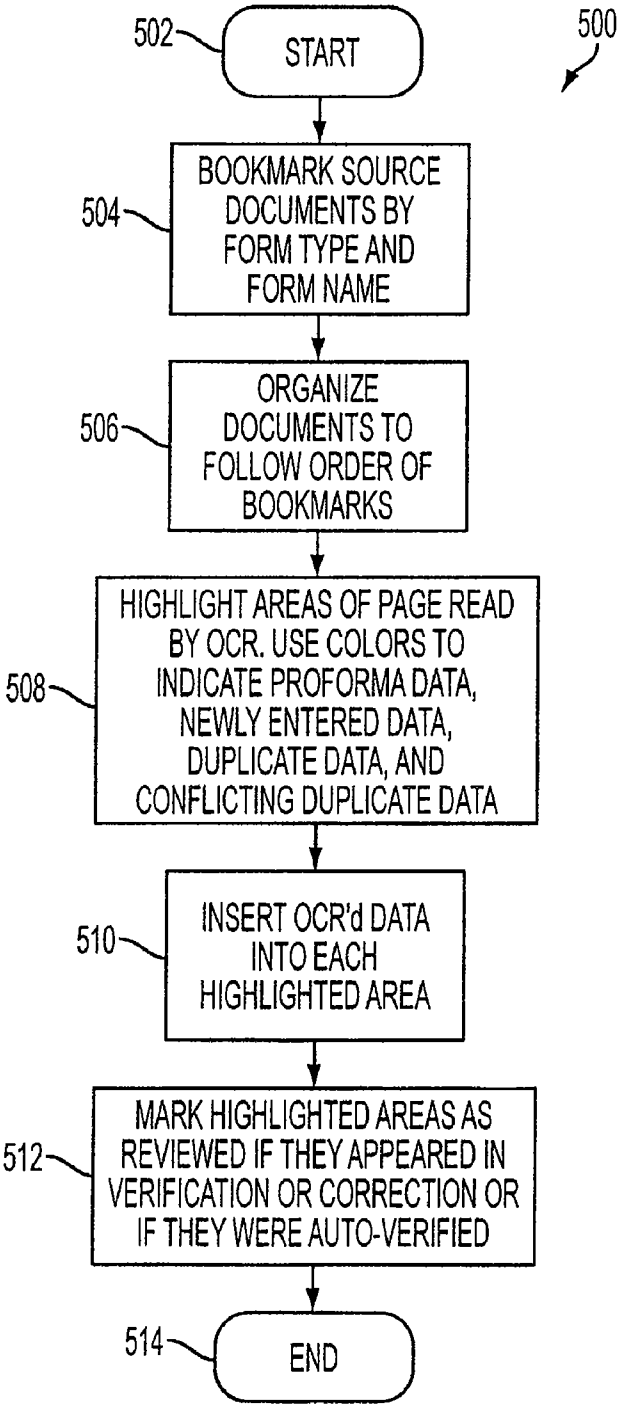
500
502
START
504
BOOKMARK SOURCE DOCUMENTS BY FORM TYPE AND FORM NAME
506
ORGANIZE DOCUMENTS TO FOLLOW ORDER OF BOOKMARKS
508
HIGHLIGHT AREAS OF PAGE READ BY OCR. USE COLORS TO INDICATE PROFORMA DATA, NEWLY ENTERED DATA, DUPLICATE DATA, AND CONFLICTING DUPLICATE DATA
510
INSERT OCR'd DATA INTO EACH HIGHLIGHTED AREA
512
MARK HIGHLIGHTED AREAS AS REVIEWED IF THEY APPEARED IN VERIFICATION OR CORRECTION OR IF THEY WERE AUTO-VERIFIED
514
END

FIG. 13

# EFFICIENT WORK FLOW SYSTEM AND METHOD FOR PROCESSING TAXPAYER SOURCE DOCUMENTS

**Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue.**

## FIELD OF THE DISCLOSURE

The present invention relates generally to processing taxpayer source documents, and more particularly to an efficient work flow system and method of processing taxpayer source documents by using Optical Character Recognition (OCR), proforma data, databases, and business rules.

## BACKGROUND

Traditionally, tax preparation was done by a single accountant. A taxpayer would give the accountant all of his or her source documents and let the accountant prepare the tax returns. The taxpayer, however, would usually have numerous source documents. For example, the taxpayer may have documents such as W-2s, Brokerage Statements, 1099s, K-1s, etc. The accountant would then have to sift through and manually organize the taxpayer's source documents. The accountant would have to transfer all of the tax data from the taxpayer's source documents into the appropriate federal and state tax return forms such as 1040, 1040 E-Z, etc.

With so many taxpayer source documents and different federal and state tax filing forms, the accountant would spend a lot of time organizing, transferring data, and verifying the data. This manual process can be inefficient, error prone and expensive since the accountant has to search for specific tax data to enter into a specific line in a specific tax filing document. Oftentimes, the accountant will have to reuse the same tax data over and over again, but has to reenter the tax data each time. Furthermore, with such a large volume of tax data, the potential for error increases, especially when a single human being is involved. With federal and state penalties increasing for mistakes, this could be disastrous for the taxpayer and the accountant. This problem is compounded when the taxpayer has to file taxes in multiple states and has multiple employers. From an accountant's perspective, this large volume of tax data also presents problems because of potential staff shortages. Not every person is qualified to handle and analyze the large volume of tax data. Thus, this restriction in qualified personnel can lead to staff shortages.

One potential solution is to convert the taxpayer source documents into an electronic form. However, simply scanning the paper taxpayer source documents to be manually read as an electronic image such as a large JPEG is inadequate because the taxpayer source documents would still be unorganized and there is no verification of the tax data. Furthermore, the tax data is not in any form that is easily accessible for automated processing. The accountant would only be able to view the data on his computer, but would still have to manually transfer the tax data to the appropriate federal and state tax filing forms. Thus, there is a need for an invention that better processes a user's taxpayer source documents.

## SUMMARY OF THE INVENTION

The present invention is a method for processing and solving the problems above. The method can be implemented, for



example, on a machine readable medium. If implemented using a machine readable medium, the present invention can, for example, cause a machine such as a computer to perform certain functions. The machine-readable medium, for example, may be a read only memory (ROM), a random access memory (RAM), a cache, a hard disk drive, a floppy disk drive, a magnetic disk storage media, an optical storage media, a flash memory device or any other device capable of storing information.

In an embodiment, the method of processing a taxpayer source document comprises receiving proforma data and an electronic image of a taxpayer source document. Proforma data can be, for example, data from taxpayer source documents from previous years, previous tax filing documents such (e.g., Federal 1040, California 540, Illinois 1040, etc.) or other various prior data (e.g., 1099-INT, 1099-DIV, etc.).

The method also comprises determining a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document. The method also comprises using the proforma data to verify data on the taxpayer source document by searching for an identification code within the electronic image of the taxpayer source document to determine whether the identification code matches the proforma data.

The taxpayer source documents can be of various types of tax statements. For example, the types of tax statements can include, but are not limited to, W-2s, Brokerage Statements, 1099-INT, 1099-DIV, K-1s, TAX EXEMPT INTEREST, TAX EXEMPT DIVIDEND, SCH-D Attachment SHORT TERM, SCH-D Attachment LONG TERM, K-1 FORM 1065, K-1 FORM 1120S, K-1 FORM 1041, FORM 1099-R (IRA), FORM 1099-R (PENSION), charity donation receipts, etc. The electronic image can be, for example, in the following formats: Microsoft Word®, PDF, TIFF, JPEG, etc. The identification code can be, for example, an employer's name and/or an employee's social security number for a W-2 form.

The method also comprises extracting data from the electronic image of the taxpayer source document and determining if the extracted data from the electronic image of the taxpayer source document has an error. The data can be, for example, tax data such as first name and last name of the employee, e-mail address of the employee, social security number of the employee, the employee's wages and salaries, the employee's date of birth, interest income, student loan interest paid, alimony paid, federal income tax withheld, etc.

The method also comprises creating an electronic document that includes the extracted data. The electronic document can be, for example, a PDF file, a Microsoft Word® document, etc.

In another embodiment, the method of processing a taxpayer source document comprises receiving proforma data and an electronic image of a taxpayer source document. The method also comprises determining a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document and selecting a routine corresponding to the type of the tax statement for the taxpayer source document. The routine, for example, can be a separate program, or part of the program embodying the current method. The routine can also correspond to the type of tax statement such as a routine corresponding to a W-2, or a routine corresponding to a 1099, or a routine corresponding to a 1098.

Furthermore, the method comprises using the routine corresponding to the type of the tax statement for the taxpayer source document and the proforma data to verify the type of the tax statement for the taxpayer source document by search-

ing for an identification code within the electronic image of the taxpayer source document. The method also comprises using the routine corresponding to the type of the tax statement for the taxpayer source document and the proforma data to extract tax data from the electronic image of the taxpayer source document.

In addition, the method comprises determining if the extracted data from the electronic image of the taxpayer source document has an error by flagging and verifying the extracted data from the electronic image of taxpayer source document that may be an error either through an inability to extract the tax data with a predetermined amount of accuracy or an analysis of the extracted tax data using business rules, and creating an electronic document that includes the extracted data. The flagging can be done, for example, by highlighting the tax data in a predetermined color, a mark such as a check or question mark beside the tax data, etc.

Furthermore, the predetermined amount of accuracy, for example, can be 70%, 75%, 80%, 85%, 90%, 95% or 100% match between the data extracted in the taxpayer source document and the related proforma data, other data, or business rules. Also, the business rules can be used to indicate if there is a potential error. For example, if the employee compensation information is listed as $12,345 in one form and is listed as $12,435 in another form, there is a potential error. Furthermore, for example, currently social security wages should be the lesser of total wages or $94,200 (for tax year 2006). If it is listed as $95,000, there may be a potential error. Also, if, for example, the sum of box 1, box 2, and box 3 should equal the amount listed in box 4, but the sum of box 1, box 2, and box 3 do not equal the amount listed in box 4, there may be a potential error. These business rules listed are merely exemplary and are not limited to the examples above.

The business rules could also be used to indicate that the extracted tax data is correct to reduce the amount of verification necessary. For example, if the sum of box 1, box 2, and box 3 should be equal to the amount listed in box 4, and the sum of box 1, box 2, and box 3 actually do equal the amount listed in box 4, then it is likely that the data indicated in box 1, box 2, box 3, and/or box 4 are correct. Thus, there may not be a need to further verify the data in box 1, box 2, box 3, and/or box 4. This could potentially save a lot of time by reducing the amount of verification necessary.

In yet another embodiment, the method of processing a taxpayer source document comprises receiving proforma data and an electronic image of a taxpayer source document and determining a type of tax statement of the taxpayer source document for the electronic image of the taxpayer source document using optical character recognition by searching for predetermined characters in predetermined locations of the electronic image of the taxpayer source document, wherein the taxpayer source document is either an income document, an adjustment to income document, or a deduction document.

Optical character recognition can be, for example, software designed to translate images of handwritten or typewritten text into a machine readable text. A wage document can include, for example, the types of tax statements that deal with wages such as a W-2. An investment document can include, for example, the types of tax statements that deal with interests such as 1099-INT. A deduction document can include, for example, the types of tax statements that deal with tax deductions such as receipts for charitable contributions or documents related to business expenses eligible for tax deductions.

The method also comprises selecting a routine corresponding to the type of taxpayer source document and using the routine corresponding to the type of taxpayer source document, optical character recognition, a supplemental database, and proforma data to verify the type of taxpayer source document for the electronic image of the taxpayer source document by searching for an identification code within the electronic image of the taxpayer source document. The method also uses the routine corresponding to the type of taxpayer source document, optical character recognition, the supplemental database, business rules, and proforma data to extract tax data from the electronic image of the taxpayer source document. The supplemental database can be, for example, an optical character recognition database with 5 databases of 2,000 financial institution names for a total of 10,000 financial institution names.

Furthermore, the method can also determine if the extracted data from the electronic image of the taxpayer source document has an error by flagging, verifying and correcting the extracted data from the electronic image of taxpayer source document that may be an error either through an inability to extract the tax data with a predetermined amount of accuracy or an analysis of the extracted tax data using business rules.

In addition, the method can also assign unassociated images of the taxpayer source documents to parent taxpayer source documents, determine if the electronic image of the taxpayer source document is superseded, determine if the electronic image of the taxpayer source document is a duplicate, determine if the electronic image of the taxpayer source document is a new taxpayer source document, supplement the proforma data with tax data extracted from the electronic image of the taxpayer source document, and create an electronic document that includes the extracted tax data.

## BRIEF DESCRIPTION OF THE DRAWINGS

The exact nature of this present invention, as well as the objects and advantages thereof, will become readily apparent from consideration of the following specification in conjunction with the accompanying drawings in which like reference numerals designate like parts throughout the figures thereof and wherein:

FIG. **1** is a flow chart of a method of processing taxpayer source documents in accordance with an embodiment of the present invention.

FIG. **2** is a screen shot that allows a user via a computer to submit a job for optical character recognition in accordance with an embodiment of the present invention.

FIG. **3** is a flow chart of a method of recognizing and reading an electronic image of a taxpayer source document in accordance with an embodiment of the present invention.

FIG. **4** is a flow chart of a method of reviewing and modifying data extracted from the electronic image of the taxpayer source document in accordance with an embodiment of the present invention.

FIGS. **5-12** are screen shots corresponding to the method of FIG. **4** of reviewing and modifying the data extracted from the electronic image of the taxpayer source document in accordance with an embodiment of the present invention.

FIG. **13** is a flow chart of a method of creating an organized source document file in accordance with an embodiment of the present invention.

## DETAILED DESCRIPTION

Reference will now be made to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings. While the present invention will

be described in conjunction with the preferred embodiments, it will be understood that these embodiments are not intended to limit the scope of the present invention. On the contrary, the present invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the present invention as defined by the appended claims. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be understood by one skilled in the art that the present invention may be practiced without these specific details. In other instances, well known systems, components, methods and procedures have not been described in detail so as not to unnecessarily obscure the important features of the present invention. As will be appreciated, various embodiments of the present invention are described herein and shown in the figures.

FIG. **1** is a flow chart of a method of processing taxpayer source documents in accordance with an embodiment of the present invention. In step **10**, an electronic image **50** of a taxpayer source document **30** is created using a scanner **40**. That is, the taxpayer source document **30** is scanned in by the scanner **40** to produce the electronic image **50** of the taxpayer source document **30**. In step **20**, the appropriate taxpayer proforma data **70** is retrieved from a tax software file system database **60**. The electronic image **50** of the taxpayer source document **30** and the taxpayer proforma data **70** are processed to have their data extracted, for example, using optical character recognition. Although optical character recognition is used, other methods of extraction are contemplated. The taxpayer proforma data **70** can be, for example, data from taxpayer source documents from previous years, previous tax filings (e.g., Federal 1040, California 540, Illinois 1040, etc.) or other prior data (e.g., 1099-INT, 1099-DIV, etc.).

FIG. **2** is a screen shot that allows a user via a computer (i.e., a processor or a computer program) to submit a job for optical character recognition (step **100**) in accordance with an embodiment of the present invention. It is contemplated that before moving to step **300**, steps **10**, **20**, **100** and **200** are repeated for each individual sheet of the taxpayer source documents until all of the individual sheets of taxpayer source documents have been processed through steps **10**, **20**, **100** and **200** (see FIG. **1**). It is also contemplated that steps **10**, **20**,**100**, **200**, **300**, **400** and **500** can all be completed for individual sheets of the taxpayer source documents until all of the individual sheets of the taxpayer source documents have been processed through steps **10**, **20**, **100**, **200**, **300**, **400** and **500**.

In step **200**, the computer recognizes and reads the electronic image of the taxpayer source document. FIG. **3** is a flow chart of the steps involved in recognizing and reading the electronic image **50** of the taxpayer source document **30**. In step **202**, an identification program, such as an optical character recognition program, attempts to identify a type of tax statement for the electronic image **50** of the taxpayer source document **30**. The identification program identifies the electronic image **50** by determining whether the electronic image **50** is a W-2, Brokerage Statement, 1099-INT, 1099-DIV, K-1, TAX EXEMPT INTEREST, TAX EXEMPT DIVIDEND, SCH-D Attachment SHORT TERM, SCH-D Attachment LONG TERM, K-1 FORM 1065, K-1 FORM 1120S, K-1 FORM 1041, FORM 1099-R (IRA), FORM 1099-R (PENSION), charity donation receipt, etc. If the type of tax statement for the electronic image **50** of the taxpayer source document **30** is identified, then the next step is **206**. Otherwise, if the electronic image **50** cannot be identified, then the method is concluded at step **214**, and the electronic image **50** of the taxpayer source document **30** does not get processed by **300** or **400**. The electronic image **50** that cannot be identified is included as an unidentified electronic image in step **500**. However, no tax data from the electronic image **50** is exported.

If, however, the type of tax statement is identified in step **204**, the method continues to step **206**. In step **206**, the electronic image **50** and the type of tax statement are sent to the appropriate recognition program. The type of the tax statement determines which recognition program is to be used to process the electronic image **50**. For example, if the type of tax statement is a W-2, then the electronic image **50** is sent to a W-2 recognition program.

In step **208**, the appropriate recognition program receives the electronic image **50** of the taxpayer source document **30** and also the taxpayer proforma data **70** and data from the OCR database **80**. The appropriate recognition program corresponding to the type of taxpayer statement verifies the type of taxpayer source document for the electronic image by searching for an identification code within the electronic image **50** of the taxpayer source document **30**. To find the identification code, the appropriate recognition program can use, for example, optical character recognition in conjunction with a supplemental database such as the OCR database **80** and the taxpayer proforma data **70**.

The identification code can be, for example, the employer's name and/or an employee's social security number for a W-2 form. Searching for an identification code can be advantageous rather than searching for text which might indicate the presence of tax data such as "Employee's name, address, and ZIP code" because the identification code will often be in larger text and it may be easier for the optical character recognition to recognize larger text. Furthermore, text which might indicate the presence of tax data might be omitted from the taxpayer source document altogether. Also, since there is generally no uniform standard format for the taxpayer source document, the text, which might indicate the present of tax data, can often vary from taxpayer source document to taxpayer source document depending on who generates the taxpayer source document. For example, the text which might indicate the presence of an employee's social security number might be any one of "Employee's SSN," "Employee's Social Security," "Employee's SSN#," "Employee's Social Security Number," "Employee's SSA Number," "Social Security Number," etc.

The identification code can be, for example, the name of a financial institution such as "Fidelity Investments" for a 1099-INT. The OCR database **80** can, for example, contain a database of names or identifications which may correspond to identification codes which the recognition program searches for in the electronic image **50** of the taxpayer source document **30**. The OCR database **80** can include multiple databases, for example, five (5) databases of 2,000 financial institution names for a total of 10,000 financial institution names. The recognition program searches the first database, then the second database, then the third database, then the fourth database, and finally the fifth database. The first database contains, for example, 2000 of the most popular financial institution names. The second database contains, for example, the next 2000 most popular financial institution names. It is contemplated that the number of databases, the number of financial institution names contained within each database, and the total number of financial institution names could be appropriately varied. Furthermore, it is contemplated that the supplemental database can contain other information aside from or in addition to financial institution names including but not limited to employer names, financial investment information, etc.

In step **210**, if the type of tax statement for the taxpayer source document is not recognized or verified, the method ends at step **214**. However, if the type of tax statement for the taxpayer source document is recognized or verified, then data, such as tax data, is extracted from the electronic image **50** in step **212**. If, for example, the tax data could not be extracted from the electronic image **50** with a predetermined amount of accuracy, or a potential error is identified through the use of business rules, the tax data could be flagged for later review. The predetermined amount of accuracy, for example, could be a 70%, 75%, 80%, 85%, 90%, 95% or 100% match between the actual tax data in the taxpayer source document and the extracted tax data. For example, the text "Washiington Mutual" might be a match with the text "Washington Mutual" if the predetermined amount of accuracy is set at 90% or below. Also, the text "Merrill Linch" might be a match with the text "Merrill Lynch" if the predetermined amount of accuracy is set at 85% or below.

Also, the recognition program can use business rules to indicate if there is a potential error. For example, if the employee compensation information is listed as $12,345 in one form and is listed as $12,435 in another form, there is a potential error. Furthermore, for example, currently social security wages should be the lesser of total wages or $94,200 (for tax year 2006). If it is listed as $95,000, there may be a potential error. Also, if, for example, the sum of box 1, box 2, and box 3 of the taxpayer source document should equal the amount listed in box 4 of the taxpayer source document, but the sum of box 1, box 2, and box 3 does not equal the amount listed in box 4, there may be a potential error. These business rules listed are merely exemplary and are not limited to the examples above and include other rules such as those mandated by the United States Internal Revenue Services, mathematical certainties, etc.

However, the business rules can also be used to reduce the amount of tax data that is flagged for later review. For example, if the sum of box 1, box 2, and box 3 should be equal to the amount listed in box 4, and the sum of box 1, box 2, and box 3 actually do equal the amount listed in box 4, then it is likely that the data indicated in box 1, box 2, box 3, and/or box 4 are correct. Thus, there may not be a need to further verify the data in box 1, box 2, box 3, and/or box 4. This could potentially save a lot of time by reducing the amount of verification necessary. Such data could be indicated by a flag, a check mark, or other indicia to indicate to the user that the data does not need to be reviewed for example in step **300**.

After the tax data is extracted from the electronic image **50** (step **212**), the method ends at step **214** and proceeds to step **300** for review and modification.

In step **300**, as shown in FIGS. **1** and **4**, the tax data is reviewed and modified if necessary. A sample screen shot of the start of the review **301** can be seen in FIG. **5**. In step **302**(a), a determination of whether auto-verification is possible/was done is made. As stated above, auto-verification can be accomplished using business rules. For example, if the sum of box 1, box 2, and box 3 should be equal to the amount listed in box 4, and the sum of box 1, box 2, and box 3 actually do equal the amount listed in box 4, then it is likely that the data indicated in box 1, box 2, box 3, and/or box 4 are correct. Thus, there may not be a need to further verify the data in box 1, box 2, box 3, and/or box 4. If auto-verification is possible/was done, then the next step is step **304** and steps **302**(b) and **303** are skipped.

If auto-verification is not possible/was not done, then the potentially erroneous tax data is verified in step **302**(b) with a sample screen shot shown in FIG. **6**. This can be done manually, for example, by a person. As shown in FIG. **6**, items **32**a-c are relevant portions of the electronic image **50** of the taxpayer source document **30** that correspond to the extracted tax data. Items **32**d-f are the extracted tax data while items **32**g-i are check boxes to indicate if a field is correct. For example, item **32**a shows an amount of "11640" from the relevant portion of the electronic image **50**, and item **32**d shows that the extracted tax data has been corrected to be "1160" as indicated by the check mark on item **32**g. Item **32**b shows an amount "950" from the relevant portion of the electronic image **50**, and item **32**h shows the extracted tax data was "450" before it is corrected as indicated by the unmarked box on item **32**h. Item **32**c shows the text "FURNITURE" from the relevant portion of the electronic image **50**, and item **32**f shows the extracted tax data has been modified to correctly reflect "FURNITURE" as indicated by the check mark on item **32**i.

When the relevant portions of items **32**a-c are clicked on, for example, by a mouse cursor, the entire electronic image **50** of the taxpayer source document **30** is displayed. Alternatively, when buttons **32**g-i are clicked on, for example, by a mouse, or a short cut key on a keyboard such as "F1" or "F2" (not shown) is depressed, the entire electronic image **50** of the taxpayer source document **30** can also be displayed. This allows the person reviewing the tax data to view other portions of the electronic image **50**. The person can also click on a portion of the electronic image **50** to redisplay the previous screen shot as shown in FIG. **6**.

In step **303**, tax data known to be erroneous is corrected. This can be done manually, for example, by a person. It is also contemplated that this could be done by one or more people. For example, after a first person has corrected the known errors, a second person can check the first person's work. Furthermore, it is also possible that the second person corrects the known errors independently of the first person and the two corrected versions are compared against each other. As shown in FIG. **7**, items **33**a-c are relevant portions of the electronic image **50** of the taxpayer source document **30** that correspond to the extracted tax data and items **33**d-f are the erroneously extracted tax data. The user can visually inspect **33**d-f to determine if they match with the relevant portions **33**a-c of the electronic image **50**. If an item is the correct data e.g. **33**f matches with **33**c, then no further action is necessary. For example, item **33**c shows the term "APPRAISAL" which has already been correctly extracted as the term "Appraisal" in item **33**f. Thus, there is no action necessary for **33**c.

However, if one or more of the items do not match, e.g. the value displayed in **33**d does not match with the value in **33**a, then further action may be necessary. For example, item **33**a shows the character "T" while item **33**d shows the options to be either "T" or "S" with "T" corresponding to "taxpayer" and "S" corresponding to "spouse." However, even if there is not a match, no action may be necessary because the erroneous tax data was already corrected during extraction. For example, the item **33**b shows the term "PURCHASE" which has already been corrected during extraction in item **33**e as the term "Purchase" prior to this step and without any user intervention or action.

In step **304**, the unassociated taxpayer source documents are associated with parent taxpayer source documents. Unassociated taxpayer source documents can be taxpayer source documents, for example, that could be used for various purposes. For example, taxpayer source documents, related to a real estate owned by the taxpayer, can be used as an itemized deduction if it is a personal residence or it can be a rental property expense if it relates to an investment property. Thus, the unassociated taxpayer source document related to the real estate owned by the taxpayer can, for example, be associated

with a parent taxpayer source document such as a Schedule E rental property, or a personal itemized deduction form. If it is associated with a Schedule E rental property, then the previously unassociated taxpayer source document would be used in the calculation of the Schedule E net income or loss. If it is associated with a personal itemized deduction form, then the previously unassociated taxpayer source document can be used for itemized deduction calculations. For example, in FIG. **8**, items **34**a-c are parent forms and items **34**d-g are unassociated taxpayer source documents. As shown by the highlighting, unassociated taxpayer source document **34**d is now associated with parent form **34**b.

In step **305**, the taxpayer source documents which have been superseded or are identical copies are noted as being superseded. A taxpayer source document can be superseded, for example, if the issuer of the source document (e.g., a bank or brokerage firm) issues a corrected copy of the same source document. A taxpayer source document can also be superseded, for example, if it contains data which is erroneous such as wrong gross wages. This can be seen if one electronic image of the taxpayer source document such as a W-2 indicates that the gross wages were $48,786 while another electronic image of the taxpayer source document indicates that the gross wages were $47,886. If the gross wages were actually $48,786, the other taxpayer source document indicating that the gross wages were $47,886 would be superseded. Also, this step can be used to identify identical copies of the same document. For instance, many times a taxpayer receives 3 copies of the same tax form. If three copies of the same taxpayer source document are created as three separate electronic images, only one taxpayer source document should be entered into the return. This feature identifies that there are three identical copies and allows the user to exclude two of them.

As shown in FIG. **9**, page **35**a and page **35**b have both been identified as the same taxpayer source document **35**. This indicates that one of the two documents is either superseded or an identical copy of the other. If a check mark is placed by item **35**a and/or item **35**b, for example, then it indicates that the check marked electronic image of the taxpayer source document has been superseded or is a duplicate copy. For example, item **35**b has a check mark placed next to it and it is noted as being superseded while item **35**a does not have a check mark placed next to it indicating that it has not been superseded.

In step **306**, the electronic images **50** of the taxpayer source documents **30** are checked to determine if the electronic images **50** of the taxpayer source documents **30** are duplicates. Duplicates can be, for example, two electronic images of the taxpayer source documents with a first electronic image of the taxpayer source document being created by the employer or payer of the taxpayer and the second electronic image of the taxpayer source document being an organizer page that was completed by the taxpayer (containing the same data as the first taxpayer source document). The data on the organizer page would be considered duplicate since the data on the source document generated by the actual employer, payer, etc. is the copy that gets reported to the IRS and thus the copy that needs to be used to prepare the return.

If duplicates are not removed, the second electronic image of the taxpayer source document could be treated as a separate taxpayer source document. Thus, there could be errors, for example, if the duplicate electronic images of the taxpayer source documents were a W-2 and a Wages organizer page. In that case, the first electronic image of the taxpayer source document and the second electronic image of the taxpayer source document would be treated as two separate W-2s. Thus, it would seem that the taxpayer has two jobs instead of just one and two incomes instead of one. This could cause problems when calculating how much taxes the taxpayer owes, or how much refunds the taxpayer is entitled to receive. For example, in FIG. **10**, items **36**a-e represent a first set of electronic images of taxpayer organizer pages while items **36**f-j represent a second set of electronic images of taxpayer source documents. Here, item **36**c and item **36**h are duplicates of taxpayer source documents. Boxes **36**k-o correspond to items **36**a-e, e.g. box **36**k corresponds to item **36**a, box **361** corresponds to item **36**b, etc. If item **36**a is a duplicate, then box **36**k can be marked to indicate that item **36**a is a duplicate. Likewise, if **36**e is also a duplicate, then box **36**o can also be marked to indicate that **36**e is a duplicate. It is contemplated that only items **36**a-e could be duplicates and not items **36**f-j.

Optionally in step **307**, as shown in FIG. **11**, if the electronic image **50** of the taxpayer source document **30** was not found within the proforma data, a user can drag and drop the listed electronic image **50** of the taxpayer source document **30** into the correct folder in the proforma data. For example, item **37**a and item **37**b are folders in the proforma data while item **37**c is a document that was dragged and dropped in folder **37**b. Items **37**d-f are electronic images **50** of taxpayer source documents **30** that have not been dragged and dropped into folders in the proforma data. By dragging and dropping the electronic image **50** of the taxpayer source document **30** into the correct folder in the proforma data, the electronic image **50** of the taxpayer source document matches up with the proforma data. Any electronic images **50** of the taxpayer source documents **30** that are not drag and dropped into the folders can be set up as a new record.

In step **308**, as shown in a screen shot depicted in FIG. **12**, the step **300** is completed.

In step **400**, the tax data **90** that has been extracted from the electronic images **50** of the taxpayer source documents **30** and used to update the proforma data and is stored in tax software file system database **60**. Thus, if the proforma data previously only contained wage information for the year 2005, and the current year for the taxpayer source document is 2006, the proforma data can be updated to include not only the wage information from the year 2005, but also the wage information from the year 2006.

Referring to FIGS. **1** and **13**, optionally in step **500**, the extracted tax data and/or the electronic images **50** of the taxpayer source documents **30** can be used to create an electronic document **55** that includes the extracted tax data. The electronic document can be, for example, a PDF, a Microsoft Word® document, etc. Step **502** signifies the start of step **500**. In step **504**, the electronic images **50** of the taxpayer source documents **30** can be bookmarked in various ways such as by the type of taxpayer source document, the name of the taxpayer source document, or even the classification of the taxpayer source document (e.g., a wage document, an investment document, or a deduction document).

In step **506**, the electronic image **50** of the taxpayer source document **30** can be optionally organized to follow the order of the bookmarks. In step **508**, the areas of the electronic image **50** of the taxpayer source document **30** where tax data was extracted, can be highlighted, for example, in various colors. For example, these colors can be aqua, yellow, green, or red. Aqua, for example, can signify that the extracted tax data was unnecessary because it was already in proforma data. Yellow, for example, can signify that the extracted tax data was exported to the tax software database in step **400**. Red, for example, can signify that the extracted tax data may be erroneous. Green, for example, can signify that the extracted tax data was exported to the tax software database in

step **400** from another source document and therefore nothing was done with the green highlighted instance of the data. It is contemplated that other colors could be used. In step **510**, the extracted tax data can be inserted in the highlighted areas of the electronic image of the taxpayer source document. Furthermore, in step **512**, those highlighted areas which have been reviewed or corrected (either manually or automatically through auto-verification), for example, in steps **302**(a), **302**(b) and/or **303** can be marked such as with a check mark. Step **514** signifies the end of Step S**500**.

The result of step **500**, for example, can be the creation of an electronic document **55** that includes some or all of the extracted tax data. The electronic document **55** can also include unidentified electronic images.

Although exemplary embodiments of the present invention has been shown and described, many other changes, combinations, omissions, modifications and substitutions, in addition to those set forth in the above paragraphs, may be made by one having skill in the art without necessarily departing from the spirit and scope of this present invention. Accordingly, the present invention is not intended to be limited by the preferred embodiments, but is to be defined by reference to the appended claims.

What is claimed is:

**1**. A method of processing a taxpayer source document comprising:

receiving, at a computer system, proforma data and an electronic image of a taxpayer source document;

determining, using a processor of the computer system, a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document;

using the proforma data to verify, using the processor of the computer system, the determination of the type of the tax statement for the electronic image of the taxpayer source document by searching for an identification code within the electronic image of the taxpayer source document to determine whether the identification code matches the proforma data;

extracting, using the processor of the computer system, data from the electronic image of the taxpayer source document;

determining, using the processor of the computer system, whether the extracted data from the electronic image of the taxpayer source document has an error *by verifying whether the extracted data is within a predetermined amount of accuracy of the proforma data*;

**[**using the proforma data to verify, using the processor of the computer system, the accuracy of the extracted data from the electronic image of the taxpayer source document;**]** and

creating, using the processor of the computer system, an electronic document that includes the extracted data.

**2**. The method of processing a taxpayer source document of claim **1** wherein the *extracted* data is tax data.

**3**. The method of processing a taxpayer source document of claim **2** **[**the**]** further comprising identifying, using optical character recognition, the type of the tax statement for the taxpayer source document by searching for predetermined characters in predetermined locations of the electronic image of the taxpayer source document.

**4**. The method of processing a taxpayer source document of claim **3** further comprising selecting a routine corresponding to the type of tax statement for the taxpayer source document.

**5**. The method of processing a taxpayer source document of claim **4** wherein using proforma data to verify the type of taxpayer source document for the electronic image of the taxpayer source document further includes using the routine corresponding to the type of taxpayer source document and a supplemental database to verify the type of tax statement for the taxpayer source document.

**6**. The method of processing a taxpayer source document of claim **5** **[**wherein using extracting data from the electronic image of the taxpayer source document further includes**]**, *further comprising* using the routine corresponding to the type of tax statement for the taxpayer source document and the supplemental database to extract tax data from the electronic image of the taxpayer source document.

**7**. The method of processing a taxpayer source document of claim **6** wherein **[**verifying**]** *determining whether* the extracted data from the electronic image of the taxpayer source document **[**that**]** may have potential errors includes flagging the extracted tax data from the electronic image of *the* taxpayer source document that **[**have**]** *has* potential errors based on an inability to extract the tax data with **[**a**]** *the* predetermined amount of accuracy or through an analysis of the tax data using business rules to determine which extracted data needs to be verified and verifying the extracted tax data from the electronic image of the taxpayer source document that **[**are**]** *is* flagged.

**8**. The method of processing a taxpayer source document of claim **7** wherein the taxpayer source document is either a wage document, an investment document, or a deduction document.

**9**. The method of processing a taxpayer source document of claim **8** further comprising **[**the step of**]** correcting the extracted tax data from the electronic image of the taxpayer source document that **[**are**]** *is* flagged.

**10**. The method of processing a taxpayer source document of claim **9** further comprising **[**the step of**]** assigning unassociated images of the taxpayer source documents to parent taxpayer source documents.

**11**. The method of processing a taxpayer source document of claim **10** further comprising **[**the step of**]** assigning unassociated electronic images of the taxpayer source documents to parent taxpayer source documents and determining which electronic images of the taxpayer source documents are superseded.

**12**. The method of processing a taxpayer source document of claim **11** further comprising **[**the step of**]** determining which electronic images of the taxpayer source documents are duplicates and which electronic images of the taxpayer source documents are new taxpayer source documents.

**13**. The method of processing a taxpayer source document of claim **12** further comprising **[**supplementing**]** *updating* the proforma data with tax data extracted from the electronic image of the taxpayer source documents.

**[14**. A method of processing a taxpayer source document comprising:

receiving, at a computer system, proforma data and an electronic image of a taxpayer source document;

determining, using a processor of the computer system, a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document;

selecting, using the processor of the computer system, a routine corresponding to the type of the tax statement for the taxpayer source document;

using the routine corresponding to the type of the tax statement for the taxpayer source document and proforma data to verify, using the processor of the computer system, the determination of the type of the tax statement

for the taxpayer source document by searching for an identification code within the electronic image of the taxpayer source document;

using the routine corresponding to the type of the tax statement for the taxpayer source document and proforma data to extract, using the processor of the computer system, tax data from the electronic image of the taxpayer source document;

determining, using the processor of the computer system, whether the extracted data from the electronic image of the taxpayer source document has an error by flagging data that may be an error and using the proforma data to verify, using the processor of the computer system, the accuracy of the flagged data from the electronic image of the taxpayer source document, wherein the error may be either through an inability to extract the tax data with a predetermined amount of accuracy or an analysis of the extracted tax data using business rules to determine which extracted tax data needs to be verified; and

creating, using the processor of the computer system, an electronic document that includes the extracted data.]

[15. The method of processing a taxpayer source document of claim 14 further comprising identifying, using optical character recognition identifies the taxpayer source document by searching for predetermined characters in predetermined locations of the electronic image of the taxpayer source document.]

[16. The method of processing a taxpayer source document of claim 15 further comprising using a supplemental database to verify the type of taxpayer source document for the electronic image of the taxpayer source document and to extract tax data from the electronic image of the taxpayer source document.]

[17. The method of processing a taxpayer source document of claim 16 wherein the taxpayer source document is either a wage document, an investment document, or a deduction document.]

[18. The method of processing a taxpayer source document of claim 17 further comprising correcting the extracted tax data from the electronic image of the taxpayer source document that are flagged.]

[19. The method of processing a taxpayer source document of claim 18 further comprising:

verifying and correcting the extracted tax data from the electronic image of the taxpayer source document that are flagged;

assigning unassociated images of the taxpayer source documents to parent taxpayer source documents;

determining which electronic images of the taxpayer source documents are superseded;

determining which electronic images of the taxpayer source documents are duplicates;

determining which electronic images of the taxpayer source documents are new taxpayer source documents; and

supplementing the proforma data with tax data extracted from the electronic image of the taxpayer source documents.]

[20. A method of processing a taxpayer source document comprising:

receiving, at a computer system, proforma data and an electronic image of a taxpayer source document;

determining, using a processor of the computer system, a type of tax statement of the taxpayer source document for the electronic image of the taxpayer source document using optical character recognition by searching for predetermined characters in predetermined locations of the electronic image of the taxpayer source document, wherein the taxpayer source document is either a wage document, an investment document, or a deduction document;

selecting, using the processor of the computer system, a routine corresponding to the type of taxpayer source document;

using the routine corresponding to the type of taxpayer source document, optical character recognition, a supplemental database, and proforma data to verify, using the processor of the computer system, the determination of the type of the taxpayer source document for the electronic image of the taxpayer source document by searching for an identification code within the electronic image of the taxpayer source document;

using the routine corresponding to the type of taxpayer source document, optical character recognition, the supplemental database, and proforma data to extract, using the processor of the computer system, tax data from the electronic image of the taxpayer source document;

determining, using the processor of the computer system, whether the extracted data from the electronic image of the taxpayer source document has an error by flagging data that may be an error, using the proforma data to verify the accuracy of the flagged data, and correcting, using the processor of the computer system, inaccurate data from the electronic image of the taxpayer source document, wherein the error may be either through an inability to extract the tax data with a predetermined amount of accuracy or an analysis of the extracted tax data using business rules to determine which extracted tax data needs to be verified;

assigning, using the processor of the computer system, the electronic image of the taxpayer source documents to a parent taxpayer source document if the electronic image of the taxpayer source document is not associated with a parent taxpayer source document;

determining, using the processor of the computer system, whether the electronic image of the taxpayer source document is superseded;

determining, using the processor of the computer system, whether the electronic image of the taxpayer source document is a duplicate;

determining, using the processor of the computer system, whether the electronic image of the taxpayer source document is a new taxpayer source document;

supplementing, using the processor of the computer system, the proforma data with tax data extracted from the electronic image of the taxpayer source document; and

creating, using the processor of the computer system, an electronic document that includes the extracted tax data.]

21. A method of processing a tax payer source document comprising:

receiving, at a computer system, an electronic image of a taxpayer source document;

determining, using a processor of the computer system, a type of tax statement for the taxpayer source document from the electronic image of the taxpayer source document;

using a supplemental database to verify the determination of the type of the tax statement for the electronic image of the taxpayer source document by searching for an identification code within the electronic image of the

taxpayer source document to determine whether the identification code matches data from the supplemental database;

extracting, using the processor of the computer system, data from the electronic image of the taxpayer source document;

determining, using the processor of the computer system, whether the extracted data from the electronic image of the taxpayer source document has an error;

using the supplemental database to verify the accuracy of the extracted data from the electronic image of the taxpayer source document; and

creating, using the processor of the computer system, an electronic document that includes the extracted data.

*22. The method of processing a taxpayer source document of claim 1 further comprising transmitting, using the processor of the computer system, the extracted data to a database containing the proforma data and updating, in the database, an existing tax record of the proforma data with the extracted data or creating, in the database, a new tax record for the extracted data.*

*23. The method of processing a taxpayer source document of claim 1 wherein the predetermined amount of accuracy is at least 70%.*

*24. The method of claim 1, further comprising determining, using the processor of the computer system, whether the extracted data from the electronic image of the taxpayer source document has an error through the use of business rules.*

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