

Automatic Address Validation Geo Coding

The common nature of all tax implementation projects require valid customer records to properly tax customers based on jurisdiction codes. Proper address validation is essential to the accuracy of the tax engine. Many companies often sacrifice this small, but critical procedure due to technology limitations.

Through an alliance with our strategic business partner, Proxix Solutions, Inc. TaxAutomation, Inc. has developed an automated solution that provides tax engines, (Taxware, Sabrix, Vertex) with accurate address and tax jurisdiction information for every customer, every transaction.

Although sales tax software vendors have their own unique way of capturing jurisdiction information by way geo-coding, human intervention remains a major factor because companies are burdened with the duty of supplying the correct jurisdiction information to the tax engine. Companies often must select whether a location is inside/outside of a particular jurisdiction. In many cases, this information is not known and the customer is contacted directly to get accurate information. This of course, can be very tedious and time consuming, but is essential in getting an accurate tax calculation.

Due to this gap in tax integrations, human error continues to have an impact on automated tax systems that frequently rears its ugly head during state tax audits.

Various problems with existing technology include:

- ✓ Zip code dependency
- ✓ County and & Municipal Boundary complexities
- ✓ Human Error
- ✓ Special Tax Districts
- ✓ Sarbanes-Oxley
- ✓ Tax Exposure
- ✓ Routine Updates
- ✓ Processing Errors
- ✓ Employee Training
- ✓ Assignment Clean-Up
- ✓ Ongoing Maintenance

TaxAutomation

The TaxAutomation-Proxix Solution:

Existing tax systems just look at State/City/Zip information to determine a tax jurisdiction code. Since ~20% of all taxing jurisdictions cross city and zip code boundaries, this is a very inaccurate/manual/error-prone method to determine the correct taxing jurisdiction. TaxAutomation identifies the taxing jurisdiction via the exact street address in terms of its location within a county or municipality.

We are therefore able to automatically and accurately determine the correct taxing jurisdiction and at the same time, provide you with a validated and properly formatted postal address. The TaxAutomation Address Validation tool is seamlessly integrated with the central address management module of SAP and, thru its open architecture, can be easily integrated with all other ERP systems.

The TaxAutomation – Proxix Solution provides a seamless integration for assigning geo-codes and tax jurisdictions automatically utilizing customer street addresses. Our automatic assignment of geo-codes significantly improves the accuracy of Taxware, Sabrix & Vertex tax engines.

The Proxix database contains information for all 50 states and is provided at the state, county, and municipality level. The municipality data contains boundary files for cities, towns, villages, boroughs, and Census Designated Places (CDPs).

The database was created using source data from the state tax statutes and regulations, the US Census (Tiger) boundary files, and other research conducted by Proxix.

When a new customer record is created, the TaxAutomation link directs pertinent data to the Proxix database. With TaxAutomation's link to Proxix, street addresses are validated and cleansed to US Postal standards and automatically assigned a geo code and the proper tax jurisdiction. The information returned from Proxix is passed directly into the tax engine. No user intervention, no errors.

MapPoint Integration

Thru integration with Microsoft MapPoint, the TaxAutomation Address Validation tool also allows you to visualize address information on an interactive map, as well as determining taxing jurisdictions for locations without a street address (this is especially interesting for companies that incur tax liabilities at locations without a street address, for example at remote locations along telecommunications, utilities or railroad lines or along the interstate highway system).

All other existing address validation technology currently on the market only cleanses your address data but does not include address data visualization nor automated tax jurisdiction code determination.

Additional Information:

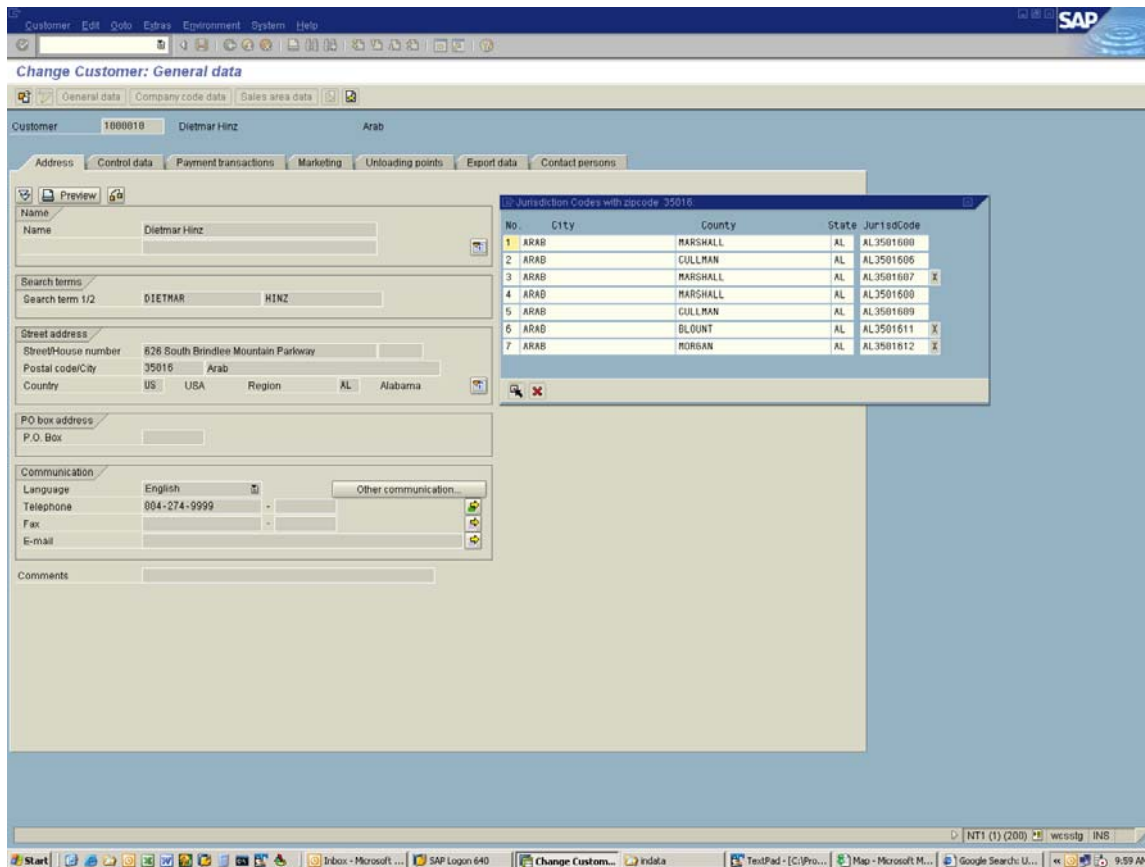
Ed Eberle

Phone: 561-995 6820 ext. 210

e-mail: eeberle@taxautomation.com

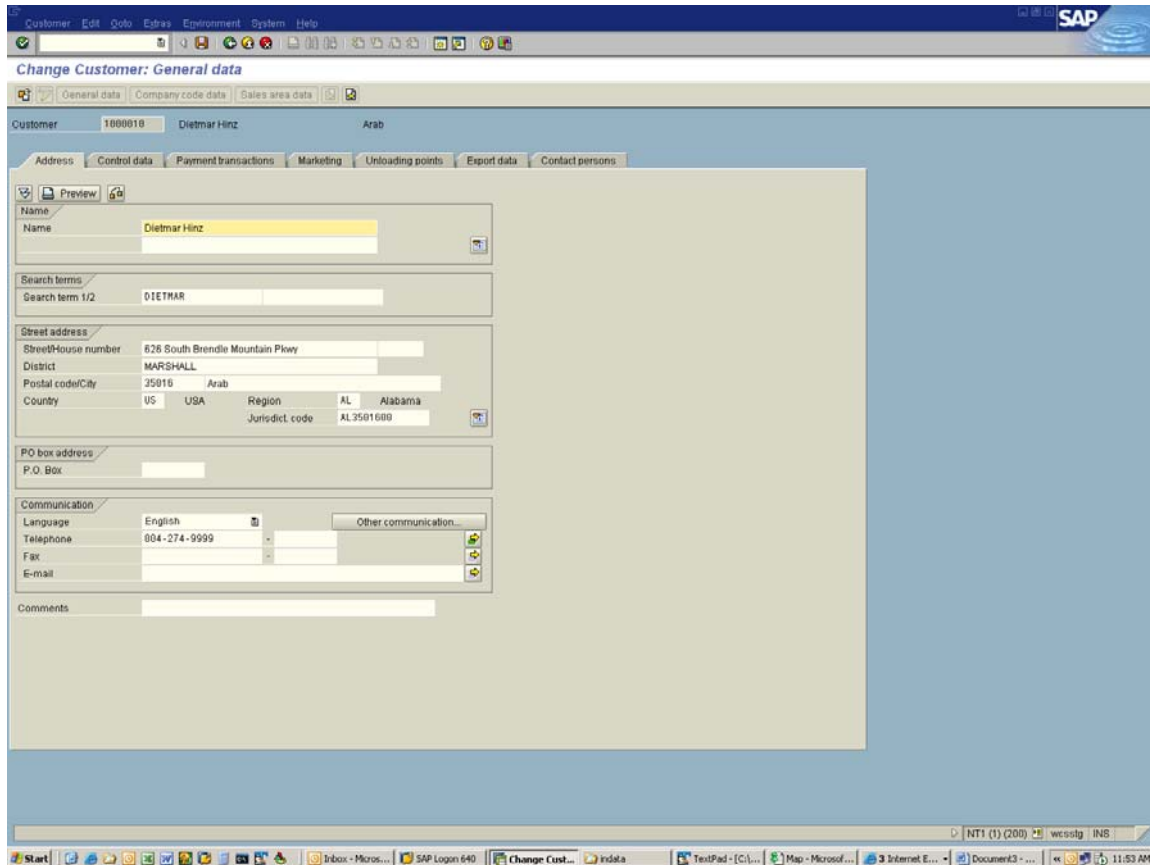
The examples below using SAP can be applied to any ERP system.

Address Validation Example



If a valid address is located in a zip code which falls into multiple counties or partly inside our outside the municipality boundaries of a city, SAP presents the user with a popup window where the user has to select the corresponding county and municipality that the specified address falls into. In this example, the user has a choice between 7 possibilities, since the zip code 35016 falls into the counties of Marshall, Cullman, Blount and Morgan. In addition, the zip code 35016 also falls partly inside the municipality of the city of Arab as well as outside the municipality boundaries of Arab. In this particular example, additional complexity exists, since the city of Arab partly falls inside a Police Jurisdiction and partly outside of this Police Jurisdiction. Overall, depending on where exactly the address is located, the applicable tax rates vary from 5% to 11%!

Address Validation Example continued



The screenshot displays the SAP 'Change Customer: General data' interface. The 'Address' tab is active, showing the following data:

Name	
Name	Diemar Heinz

Search terms	
Search term 1/2	DIEMAR

Street address	
Street/House number	626 South Brendle Mountain Pkwy
District	MARSHALL
Postal code/City	35016 Arab
Country	US USA
Region	AL Alabama
Jurisdiction code	AL 3501600

PO box address	
P.O. Box	

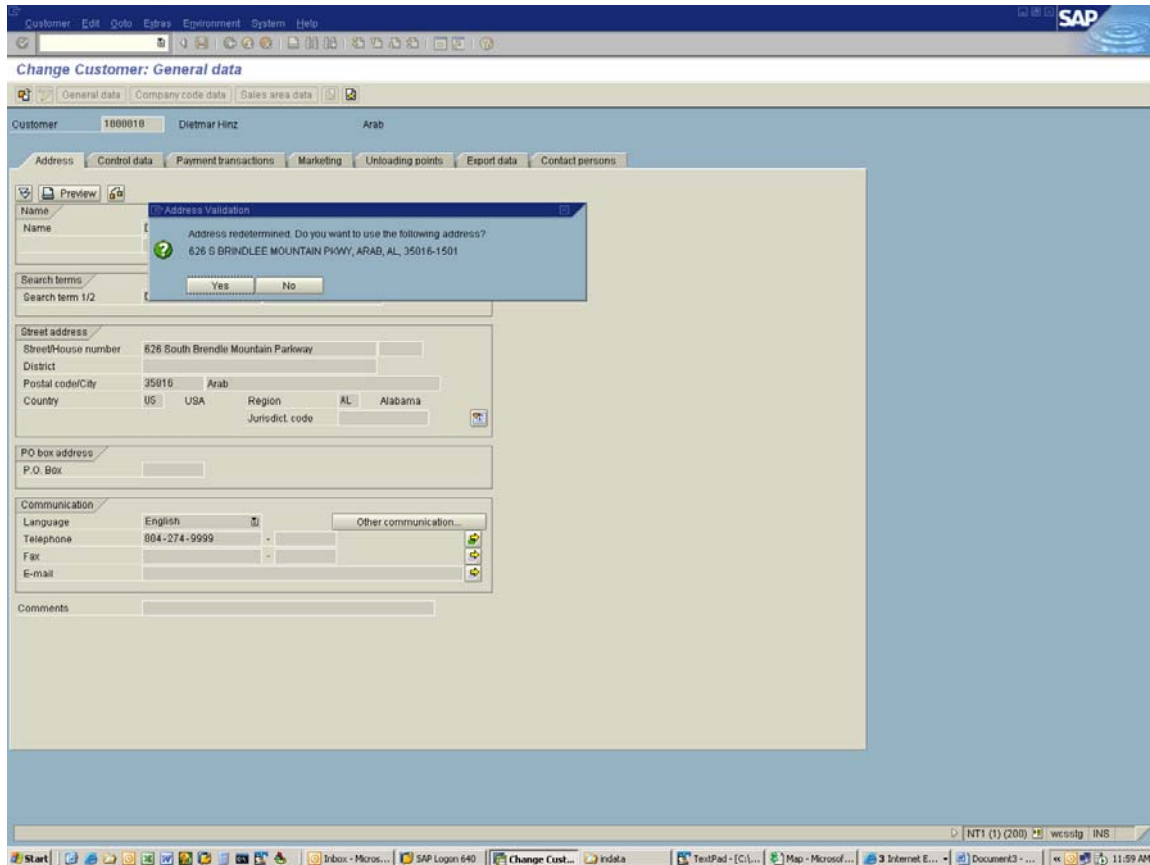
Communication	
Language	English
Telephone	804-274-9999
Fax	
E-mail	

Comments	
Comments	

Since SAP does not validate the spelling or the existence of the street address information, it is possible for a user to enter 'anything' into the street address field.

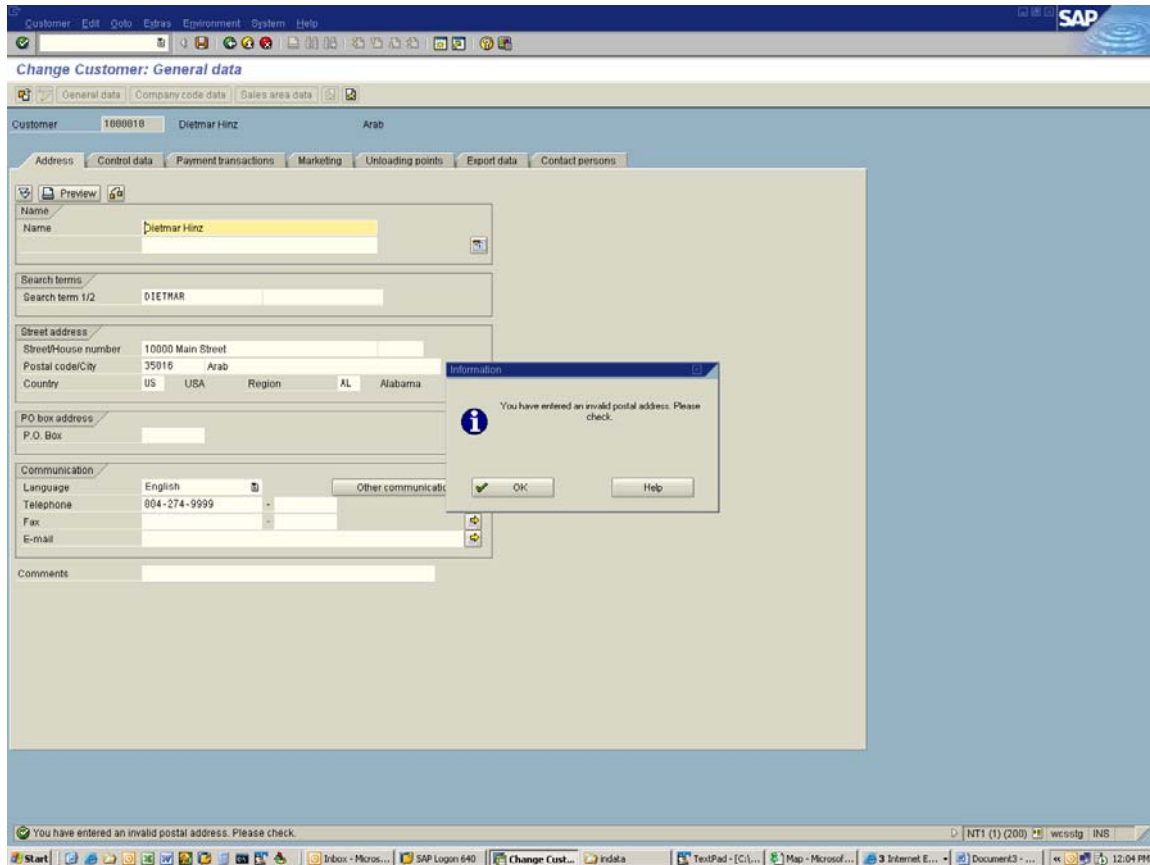
In this example, the user entered: '626 South Brendle Mountain Parway', which is an address that does not exist.

Address Validation Example continued



With the TaxAutomation Address Validation Tool, the system will first correct any misspellings of the street address, zip-code and city information. In this example the incorrect address of '626 South Brendle Mountain Parkway' is automatically corrected to the properly formatted address of '626 S Brindlee Mountain Parkway'.

Address Validation Example continued



If a completely invalid (none existent) address is entered, the system can prevent the user from saving the address (configurable).

In this example, the house number '10000' does not exist on 'Main Street' in Arab, AL 35016.

Address Validation Example continued

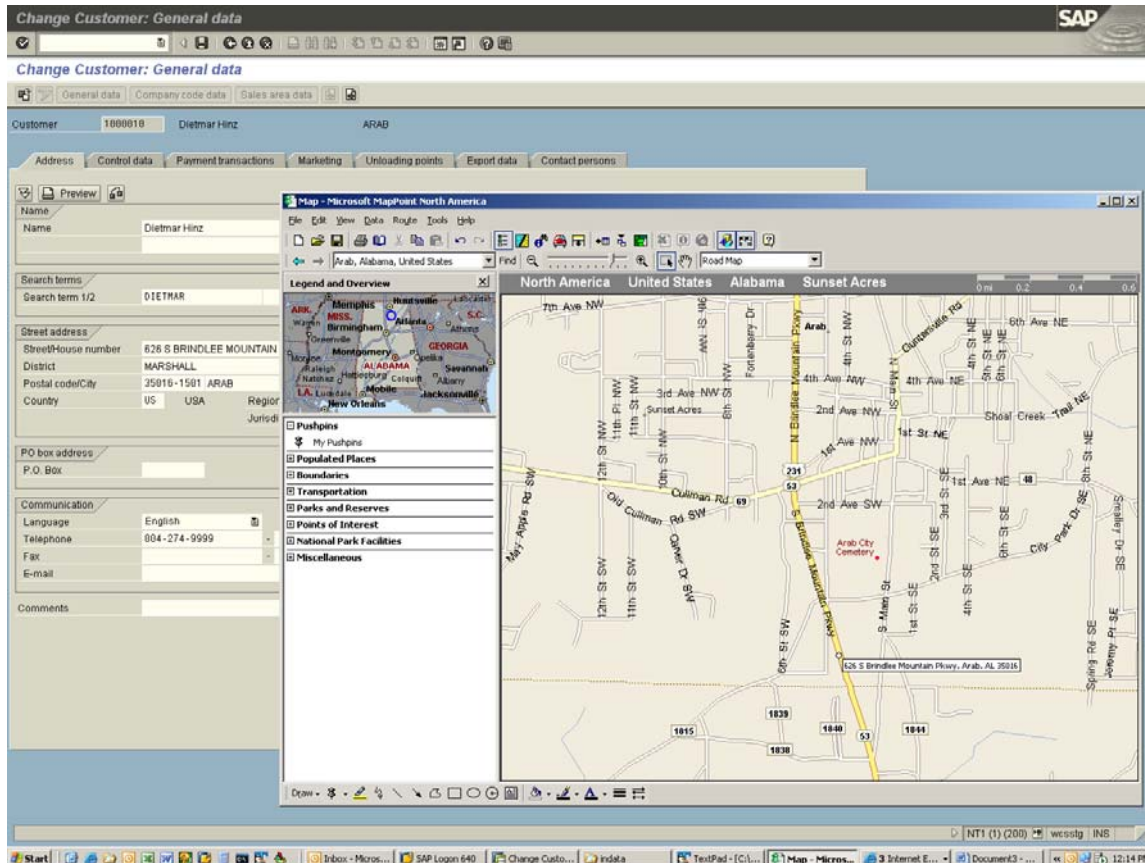
The screenshot displays the SAP 'Change Customer: General data' window. The customer name is 'Dietmar Hinz' and the address is '626 S BRINDLEE MOUNTAIN PKWY, MARSHALL, ARAB, AL 35016'. The system has automatically determined the tax jurisdiction code as 'AL3501608'.

Street address	
Street/House number	626 S BRINDLEE MOUNTAIN PKWY
District	MARSHALL
Postal code/City	35016-1501 ARAB
Country	US USA
Region	AL Alabama
Jurisdiction code	AL3501608

Communication	
Language	English
Telephone	804-274-9999
Fax	
E-mail	

With a properly formatted and validated address, the TaxAutomation Address Validation Tool will then automatically determine the tax jurisdiction code, without prompting the user for a manual determination. In this example, the system automatically determines that '626 S Brindlee Mountain Pkwy, Arab, AL 35016' is located in Marshall county and both inside the municipality and the Police Jurisdiction of the city of Arab. The correct tax jurisdiction code of AL3501608 is determined, which will cause SAP to tax this customer at the applicable tax rate of 7%.

Address Validation Example continued



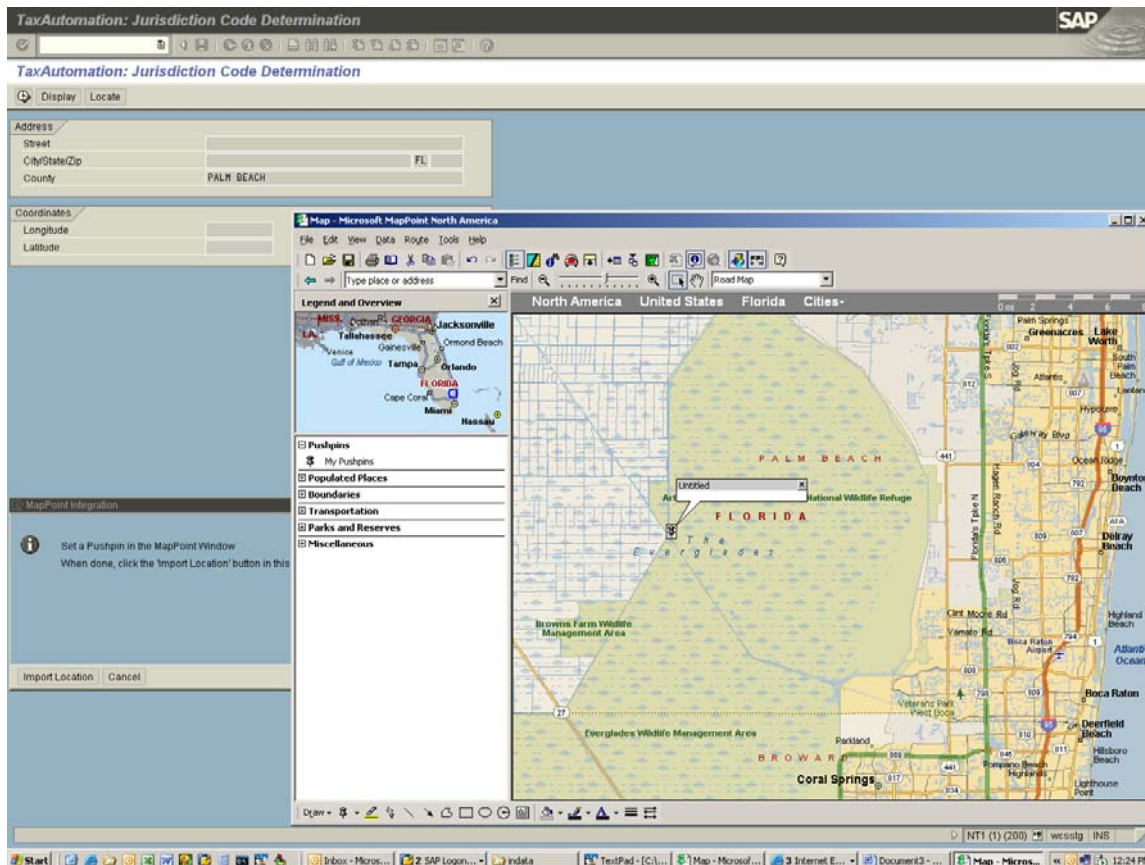
In addition to validating the address information and automatically determining the correct tax jurisdiction code, the TaxAutomation Address Validation Tool can also be used to visualize address information on a map.

Thru a complete integration between SAP and Microsoft MapPoint, the user can visualize any address in SAP. A button click in SAP automatically launches Microsoft MapPoint and centers the map on the specified address.

This integration between SAP and Microsoft MapPoint also allows for the calculation of distances between addresses or the generation of driving directions between addresses. All accessible and controlled directly within SAP.

TaxAutomation

Address Validation Example continued



Alternatively, the TaxAutomation Address Validation Tool can be used to determine the tax jurisdiction for places that are not associated with a street address. This is especially interesting for companies that incur tax liabilities in places that are not associated with normal postal addresses. These are for example companies that deliver to or self assess tax at locations along power, telecommunication or railroad lines or along interstate highways.

With the TaxAutomation Address Validation Tool, the SAP user simply launches Microsoft MapPoint for a general area (i.e. state or county). Then, by zooming into a particular area on the map, the user can set a 'Pushpin' on the map (at the location for which a tax jurisdiction code should be determined). By selecting the 'Import Location' button in SAP, the system determines the Longitude/Latitude of the selected location, as well as the associated county and municipality boundaries. With this information the system is then able to determine the tax jurisdiction code for the selected location, which is then automatically imported into SAP.

Additional Information:

Ed Eberle

Phone: 561-995-6820 ext. 210

e-mail: eeberle@taxautomation.com