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The Computer's Role in Simplifying Compliance with State and Local Taxation

*Ray Westphal**

I recently polled several tax managers of large corporations that engage in a multistate business and asked them whether their companies could stay in reasonable compliance with state and local tax law without using the computer. All said that it would be impossible to meet the compliance requirements of the states and localities without heavy dependence on computers. This reliance on the computer is not surprising given the amount of data that firms must reference to keep up with the thousands of taxing jurisdictions throughout the United States. The many different types of taxes that governmental bodies impose further complicate the situation.

How does the computer help? The computer provides automated processing of routine transactions, such as calculating employee payroll withholding taxes, calculating sales taxes on orders, calculating corporate income taxes, summarizing property by geographic location, and other mundane tasks that must be done to stay in compliance with the numerous types of tax legislation. Through computerization of the routine tasks, the tax managers who are responsible for compliance have more time to read the laws, make interpretations, and ask questions.[1] The following chart illustrates the incidence and complexity of some of the particularly difficult corporate taxes.[2]

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1. Some other state and local taxes applicable to business include business and occupation taxes, franchise taxes, license taxes, and excise taxes.

2. There are a few exceptions throughout the states at the local level.

Type of Tax	Number of Jurisdictions Imposing this Tax	Yearly Changes	Calculation Methods	Year Computer Service Available
Corporate Income	47 states 150 local	200-300	54	mid-1960s
Individual Income	41 states 102 counties 3176 cities, townships	300-400	7	mid-1960s
Sales/Use	46 states 1192 counties 5100 cities 593 rapid transit locations	400-500	1	1975
Property-Real & Personal	thousands	all	numerous	not available

There are several thousand local taxing jurisdictions throughout the United States. Although a few of these local jurisdictions are uniform within a state,[3] this is not always the case. The rates of tax are often different; within one state there may be many different combinations of state, county, city, and rapid transit district taxes. For example, Colorado has twenty-three combinations of sales taxes and Washington has seventeen.

A brief examination of each of the taxes shown on the chart will illustrate the magnitude of the compliance problem and the computer's role in simplifying compliance. The corporate income tax requires both different calculations and different rates for each state. The number of calculation routines alone makes this tax a candidate for computerization. Computerized preparation of tax returns and performance of calculations has been available for many years, at a considerable savings in time and cost to the corporate tax manager.

Many more jurisdictions impose an employee income tax (sometimes called a payroll withholding tax) than impose a corporate income tax. The bulk of the local taxes, however, occur in Ohio, which has 477 cities and school districts imposing an income tax, and in Pennsylvania, with over 2500 taxing cities, boroughs, and townships. Although the number of calculation routines is only seven, each of these jurisdictions has its own rate or rate table. Consequently, the tax compliance problem is an ideal candidate for computerization. It would be rare to find a large company today that has not mechanized its payroll preparation, including the

3. For example, all the cities in California and the counties in Virginia have adopted uniform sales tax rates.

calculation of withholding taxes.

Still more jurisdictions impose sales and use taxes. Roughly half the states have local tax structures in addition to the state sales tax. Fortunately, the calculation required for all these jurisdictions is the same, with several exceptions.[4] The sheer volume of individual local rates and the relatively high numher of annual changes, however, make this tax another prime candidate for a computerized solution.

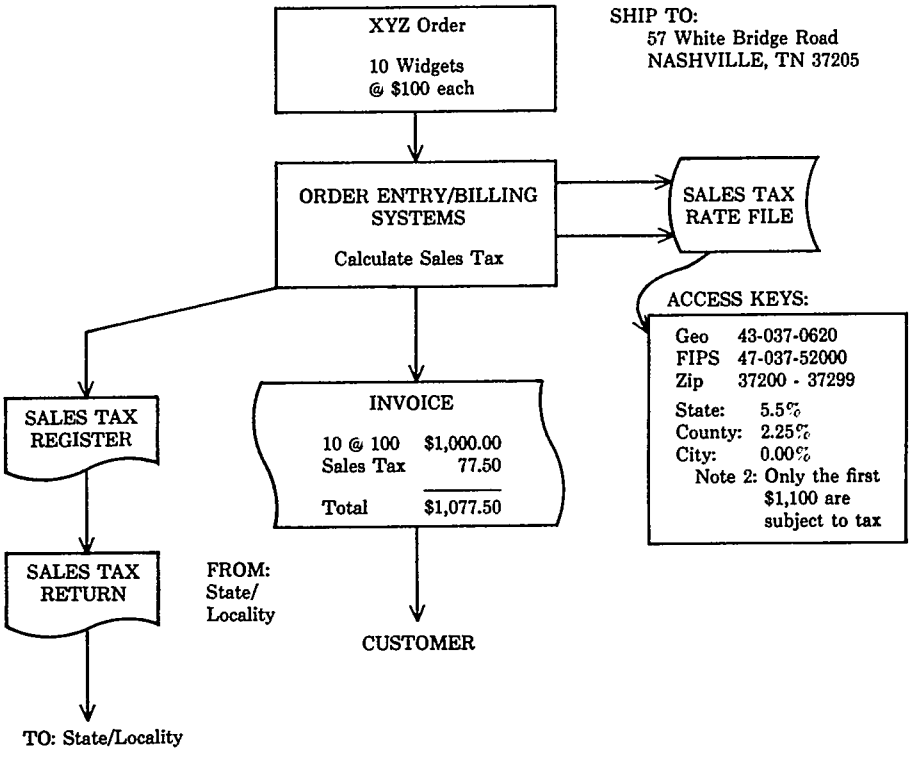
Multistate businesses also are concerned about the property tax, both for real property and for tangible personal property. Because of the way in which property taxes are billed, no computerized solutions yet exist, other than providing computerized summaries of property by each assessing jurisdiction.

A more detailed examination of the sales tax area illustrates how a computer solution simplifies the compliance problem. To be in compliance, the corporation engaged in a national business and having a nexus to all the states has the responsibility of charging, collecting, and reporting the sales and use tax. To manually look up the current tax rate by state and by city is not only time consuming, tedious, and expensive, but is also prone to error. Each state uses a different format in providing the rate data; for a customer doing repeat business the same rate must be entered time and time again, and whenever a rate change occurs each customer data record must be located and changed.

For a computer system view, the "right" way to automate the application of sales and use taxes requires that the many state methods of describing rates be standardized into one format. A separate file of all the tax rates is maintained, and this file is accessed to recover the current tax rate when the computer performs a customer billing operation. The rate file is maintained separately from the customer file and is updated between billing operations when rate changes occur. The following fiow chart portrays a typical corporate computer system that uses a sales and use tax rate file.

4. *See infra* note 8 and text following.

TYPICAL ORDER-BILLING PROCESS



Starting at the top with the receipt of the customer order, the vendor transcribes this order information into the computer system by keypunch, video display, or some other data transcription method. After other order entry and billing operations have been performed, the computer will then access the sales tax rate file, which generally is stored on a random access disk device for the particular location that the order is to be shipped. In the example, 57 White Bridge Road, Nashville, Tennessee 37205, is the destination of the order. A GEO (geographic) code,[5] FIPS code,[6] and ZIP code[7] all identify the sales tax information for Nashville.

Continuing with the information flow, the computer has generated an invoice that is ready to be mailed to the customer and that contains the unit charges, the total sales tax, and the total invoice amount. Additionally, the computer has generated a sales tax report summarizing all the sales in each taxing jurisdiction, structured by GEO code, so that this information may be easily transcribed to the state sales tax report form that is remitted with payment to the individual states.

This process applies to companies that bill their customers on receipt of an order. For other firms that expect payment with the order, such as mail order, the customer would be told on ordering

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5. The GEO code is a nine digit numeric code structured as follows: the first two positions indicate the state; the next three positions indicate the county; and the last four positions indicate the city. Each city is uniquely coded within a state. Every state and county in the United States is coded. Also, all cities with populations over 250 and all taxing cities regardless of population are coded with a unique GEO code number. The total file size is over 44,000 data records. Each data record contains 200 "bytes" or characters of information. The total file size is approximately 8.8 million numbers and letters. Because computer memories are able to store vast amounts of information, the storage required for the sales tax file is accommodated easily by both large computer systems and mid-size mini-computer systems.

6. FIPS means Federal Information Processing Standard. The Census Bureau created this ten position code in the mid-1970s, and it has been adopted by a number of businesses as a geographic locator code for various purposes. Vertex added this code to its SALES-TAX™ file to accommodate these businesses. The structure of the code is similar to the GEO code: two positions indicate the state, and three positions indicate the county, but five positions are devoted to the city number.

7. The postal ZIP code is a very desirable access key because it is carried already on customer files as part of the destination of shipment address. Unfortunately, because the ZIP code does not distinquish between county and city limits and because the same ZIP often is used to identify several small towns, it is a less than perfect locator for sales tax purposes. When combined with the name of the city or town to verify the match, however, the ZIP code and city name combination results in accuracy rates of over 97% for most users. Many Vertex subscribers use the code in this manner. Firms that have a high volume of transactions and a relatively low unit price tend to use the ZIP code because of the efficiency gained; firms with a low transaction volume and a high dollar cost per unit tend to use either the GEO or FIPS code because of the 100% accuracy these codes provide.

to remit the state and local taxes due. The sales tax rate file then would be used to verify that the correct amount had been remitted.

The ability to computerize the sales tax rate turns a difficult, time-consuming clerical problem into a routine data processing task for the national vendor. It is not necessary to have a large, highly sophisticated computer operation to automate the sales tax function. Data processing installations of all sizes can easily convert their order entry and billing system to accommodate the retrieval of rates from a sales tax rate file.

To avoid oversimplifying the automated sales tax system, a few rate and computation exceptions that apply in several of the states must be addressed.[8] For example, several of the states permit city sales taxes to preempt or override county sales taxes. Because the exception is the same in each of these states, the system for handling this can be very straightforward. A unique "override exception code" data field can be provided for every city record in the file. When the computer program that calculates the combined state-county-city tax encounters an override exception code, it can be instructed to use only the state and city rates, bypassing the inclusion of the county rate.

A second example concerns a few small towns in Arizona that have a graduated tax rate. For example, in Holbrook the tax is two percent on the first one thousand dollars of the sale; the excess is taxable at one percent. To comply with this exception, Holbrook is identified by a unique code; when the program encounters that code, an exception calculation would be made, which would have been stored in a subroutine of the main program.

There are also a few exceptions in the applicable rate because of the nature of the article being sold. Motor vehicles, food, production machinery, and farm machinery are taxed at rates different from the general sales tax rate in several states. Only one state, Alabama, however, taxes these items differently at the local level; the rest of the states have only a difference in the state rate. The state-level nature of these exceptions makes the matter of compliance relatively uncomplicated for the multistate seller in these product lines.

Although it seems clear that the sales tax rate file eliminates much of the compliance burden of the multistate vendor, many are

8. The county maximum tax in Tennessee that was used in the example is such an exception.

concerned that computer solutions are cost prohibitive. This concern is unfounded; the price of subscribing to a sales tax maintenance service for a year is less than one third of the annual salary of a clerical office worker. Furthermore, the computer processing costs to access the file and to perform the computations are very small, even for high transaction businesses.[9]

In summary, computers have greatly simplified the multistate corporation's compliance burden for corporate income taxes, payroll withholding taxes, and state and local sales or use taxes. Proven commercial services have greatly reduced the time and money required to maintain compliance in several state and local tax areas, and the price of these services is minimal compared to the benefits derived. As Justice Fortas so aptly noted in his dissent in *National Bellas Hess*[10] when addressing the issue of administrative burden on mail order, we should not underestimate the capability of man and his machines in dealing with these problems.

9. My company, Vertex, has provided computerized sales tax rate services to United States businesses since 1975. Currently, over 350 firms with multistate or national businesses subscribe to our computer SALESTAX™ system, and another 1000 companies subscribe to the loose-leaf tax rate directory that we publish. Many of the firms using the loose-leaf service update their own computer tax rate files with the changed information contained in the monthly updates. The firms using the computer service include many Fortune 500 companies, but by no means are all subscribers of that size. Many much smaller firms are subscribers to either the computer tape or loose-leaf service.

10. National Bellas Hess, Inc. v. Department of Revenue, 386 U.S. 753, 766 (1967).