A Warehouse with Many Floors and Many Doors
Data Warehousing and Data Mining at the Iowa Department of Revenue


IDR Information Platforms

Figure 1
Evolution of IDR Information Systems

- Integrated Revenue Information System (IRIS)
    - Corporate Income Tax (1995)
    - Individual Income Tax (1997)
    - Sales and Use Taxes (2002)
- Tax Gap Enterprise Date Warehouse (1999)
Tax Gap Enterprise Data Warehouse

Tax Gap EDW Supported Programs

- Lead Generation
- Audit Component Application
- Value Added Application
Business Flow Diagram

Legend
- Primary data source
- Primary match source
- Screening data source
- Final Leads List

Discovery Program 2 - Business Flow Diagram
Corporate Income Tax Non-Filer - IRS BMF/BRTF
Project name: Discovery Program 2 - Corporate Income Tax Non-Filer
Primary Source: IRS BMF/BRTF
Primary Match Source: Corp. Name and Address and Corp. History

Leads Menu

Audit Component
Table: Leads
- Open
- Find
- Create Subset
- Assign

Graph: Pie Chart
- Bus Bar
- Taxpayer
- Description
- Notes
- Save
- Cancel
- New

Remarks
- Time Frame: 15
- Reminders
- Correspondence Reminders
- Reminders

Date: 05-29-2003
**Tax Research Server & Client Software**

- **Business Intelligence Server Tier**
  - Base SAS
  - SAS Graph
  - SAS Stat
  - SAS ETS
  - Metadata Server

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Base SAS</td>
<td>SAS Access for PCFF</td>
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<tr>
<td>SAS Graph</td>
<td>SAS Access for ODBC</td>
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- **Client Tier**
  - Enterprise Guide
  - Add-In for MS Office
  - Information Map Studio
  - Management Console

**Reasons for a Separate Tax Research Data Warehouse**

- Data must be structured in different way to support different uses
- EDW users need only “thin” client/ Tax Research staff need “fat” client
- Tax Research staff require sophisticated statistical analysis and model development capability
- Requests received by Tax Research staff require fast turnaround
- Desire for better data management and application portability
Major Tax Research Activities
Supported by the Data Warehouse

- Fiscal impact estimates
- Economic and revenue forecasts
- Statistical reports
- Ad hoc information requests
Advantages of BI Server/ EG Software

- Access to data on different platforms
- Point-and-click programming
- Improvement project management
- Project documentation
- Improved report generation and delivery
- Greater self-sufficiency
- Quicker response times
Ad Hoc Information Requests

- How many taxpayers claimed a given tax credit each of the past five years and how much was claimed?
- How many taxpayers earned over $1 million last tax year?
- So far this processing season how do wage, interest, dividend, and farm income compare to last year for taxpayers that filed returns both years?
- What has been the amount of taxable sales for a given type of business in a five county area each of the past four quarters?
- How much have consumers spent on motor fuel purchases each month for the past three years?
Quarterly and Annual Taxable Sales
for Businesses Located in Johnson County

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<th>Business Code</th>
<th>Business Group</th>
<th>Calendar Year 2005</th>
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Challenges

- Training and mastery of the software
- Organizing, documenting and managing the data
- Identifying how to better meet the information needs of customers
Future Directions

• Streamline work processes
• Incorporate GIS capability
• Explore new options for information delivery to customers
• Expand research support for compliance programs

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