



# Stopping Refund Fraud Through the Use of Sophisticated Methods of Deterrence

**John Bace – Revenue Solutions, Inc.**

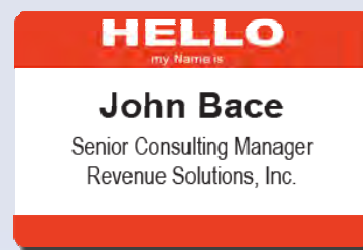
*FTA Technology Conference*  
**August 7, 2007**

FTA Technology Conference 2007

## Introduction



- Data Warehousing & Business Intelligence Practice Line Manager at Revenue Solutions, Inc.
- 12 years consulting, primarily in taxation industry: decision support, tax compliance, warehousing
- Last 4 years spent managing the ongoing implementation of a data warehouse and the business solutions it supports for the Massachusetts DOR



## The Problem...



*As refund fraud **schemes become more sophisticated,***

*so must the methods of deterrence to stop fraudulent return checks **before they go out,***

*while at the same time maintaining expected refund **turnaround time and avoiding disruption or inconvenience for compliant taxpayers.***

## Agenda



- Defining the refund fraud problem
  - MA DOR Case Study
- Solution approach
  - Business solution overview
  - Technical integration
  - Generic “*Decision Management*” functions
- Implementation results
  - Summary statistics from 2007 filing season
  - Key lessons learned
  - Future plans

# Defining Refund Fraud



## Multiple types ...

- **Identity theft or use of fraudulent identities**
  - Criminals using someone else's SSN to have refunds issued under a different name and address
  - Fabricated SSNs and identities to "test" the system and attempt to obtain refund checks
- **Fraud schemes using real identities**
  - Convince uninformed people, *often out of state*, that they qualify for a "refund program" and then file on their behalf
- **Inaccuracies to qualify for refundable credits**
  - Often self-employed business claims
  - Falsify income to qualify for the Earned Income Tax Credit

# MA DOR Case Study



- Anecdotal evidence of *significant and increasing* levels of fraud
- Need to improve the solution and realization that the data warehouse might play some role in combating refund fraud
- Solution constraints and direction:
  - Reluctance to impede returns processing flow, which might create refund delays – *emphasis on refund turnaround time*
  - Need for additional staff to process cases, but emphasis on automation
  - Evaluate refund claims *prior* to issuing checks, instead of post-refund
  - Concerns over technical integration between any warehouse-based decision solution and the legacy returns processing channel
  - Provide compliant taxpayers opportunities to respond if their refund is suspended for review and they are asked to provide further information
  - Recognition of possible political repercussions

## Solution Approach



- **Combined team:**
  - Data Integration Bureau
    - Returns processing and manual inspection for possible fraud
  - Bureau of Desk Audit (supplemented with seasonal staff)
    - Returns examination and case management
  - Taxpayer Services Bureau
    - Call support and back-end abatement processing
  - Applications Development Bureau
    - Systems administration and integration services
  - Taxpayer Advocate
    - Taxpayer concerns and policy questions

## Solution Approach



- **Required a coordinated, holistic view:**
  - New front-end returns processing automation rules
    - Check for confirmed taxpayers; check for suspicious IDs, bank accounts, addresses, etc.
  - New registration data change procedures
    - Disallow name and address changes at the same time
  - New audit “fraud model” rules and evaluation\*
    - Queue up pending refunds and evaluate against model
  - New case review procedures, inbound call and correspondence support, and abatement procedures
    - Consistent application of procedures and policy
  - New performance monitoring reports and procedures
    - Cognos-based Refund Fraud Dashboard

## Solution Approach – Step by step



- First, **PRE-VALIDATE**
  - Identify those identities that can be confirmed in advance, consider them *pre-validated*, and use list to accelerate refund requests submitted under these IDs and name combinations; *limit “in-line” processing*
- Second, **REVIEW and SCORE**
  - For those returns that are not pre-validated, conduct a comprehensive review of entity/taxpayer information in the warehouse to attempt to confirm:
    - Identity (ID and Name)
    - Refundable credit claims

## Solution Approach – Step by step



- Third, make a **DECISION**
  - For those returns where identity and credits *can be confirmed* (either manually or automatically), allow the refund request to be processed
  - For those returns where identity and credits *cannot be confirmed*, issue a system-generated letter to the taxpayer requesting additional information
- Fourth, **ACT AUTOMATICALLY** when there is no response to the notice
  - Inactivate credits
  - Post return without credits (\$0 Balance or Receivable)
  - Most fraudulent returns will have no response to the notice, and require limited or no manual intervention

## Solution Approach – Adaptive



- Monitor volumes and outcomes closely and adapt as necessary
  - New potential pools of pre-validated taxpayers
  - New rules for automatically releasing refunds where specific criteria are met
  - Ongoing manual review of decisions for accuracy and for suggested modifications to rules

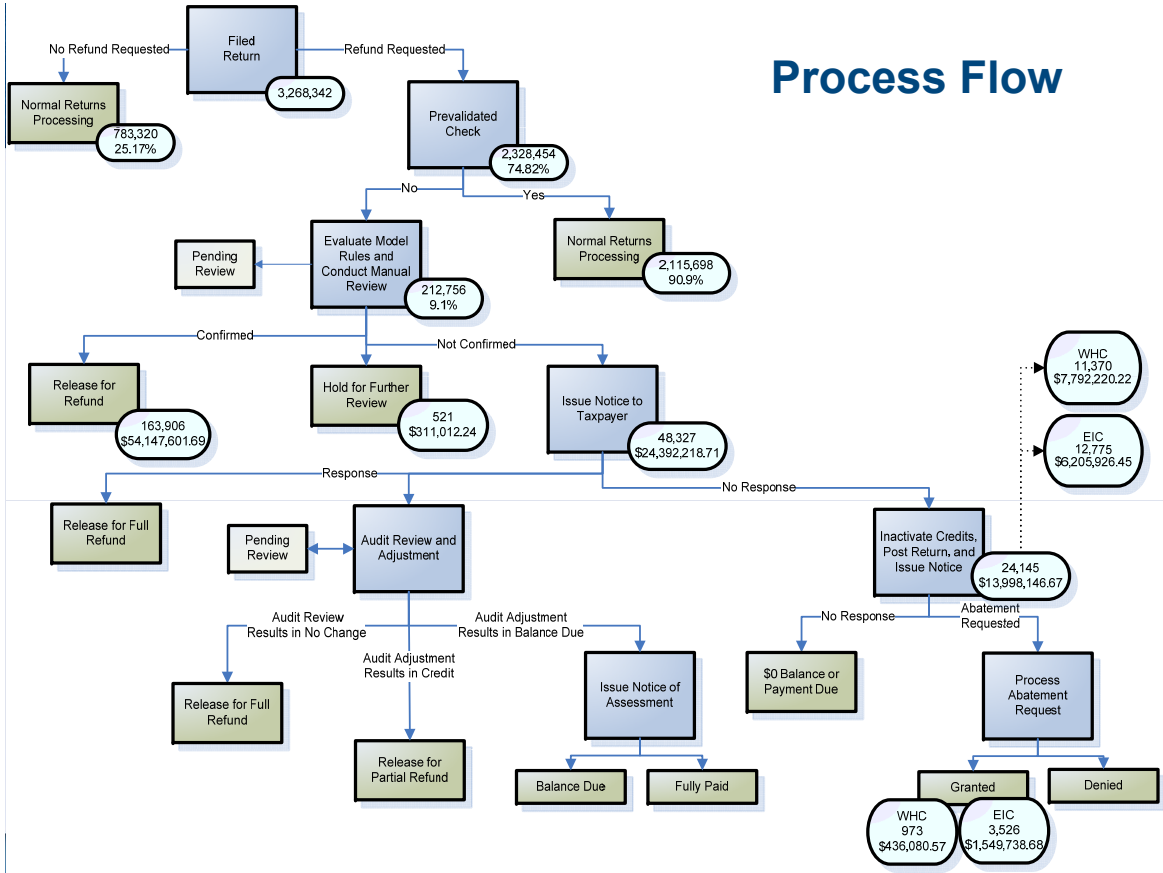
## Pre-validated Criteria Examples



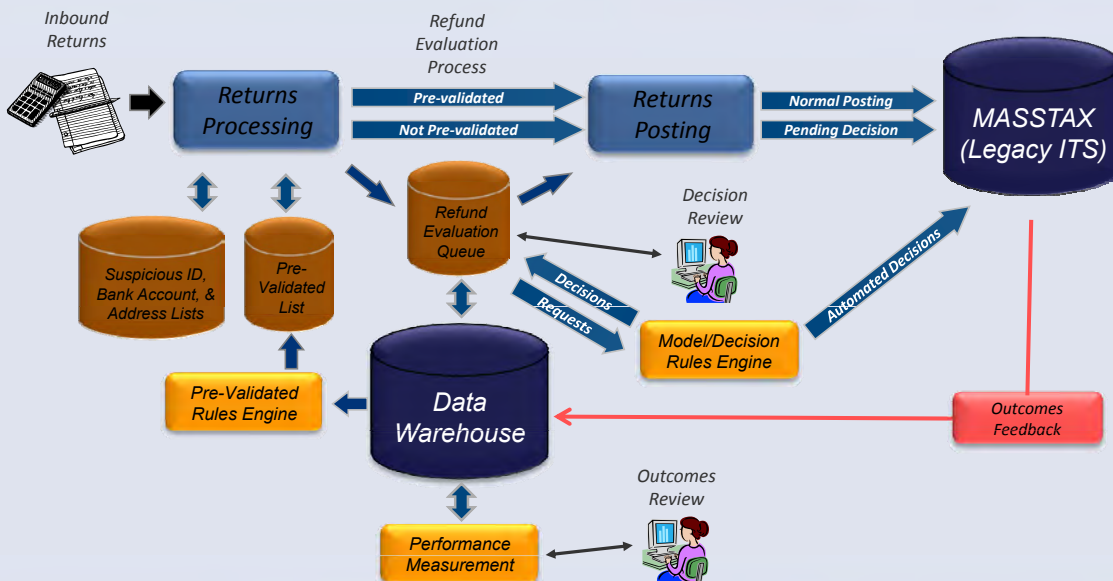
- Identity confirmed by a third party, such as:
  - Federal tax returns and other data
  - Motor Vehicles (Driver's licenses)
  - Lottery winnings
  - US Military
  - Recipients of state benefits

*(Although fraud examples were identified within some of these sources as well)*
- Taxpayer confirmed through their filing history with the state (as either primary or secondary)

# Process Flow



# Technical Integration



# Manual Review Process



DiscoverTaxWebClient - Microsoft Internet Explorer

Address: https://dor-dtaxapps.dor.state.ma.us:8443/ThinClient/WebClient/DiscoverTaxWebClient.aspx

DiscoverTax - Selection Result Details

Manually Review Refund Queue and Apply Decision Result Details (#23715) - Locked

Mark with manual decision

Compare to Model decision

Link to review WH portfolio

Apply	Entity ID	Updated By	Selection Codes	Case ID	PROPOSED	REFUND_QUEUE_ID	EN
<input type="checkbox"/>	45021647	SILVAD	Release for Refund		NO_WR1	188343	
<input type="checkbox"/>	2859344	SILVAD	Issue PS118 Notice		PS118Notic	188349	
<input type="checkbox"/>	19048274	SILVAD	Release for Refund		PS118Notic	188353	
<input type="checkbox"/>	31140096	SILVAD	Issue PS118 Notice		NO_WR1	188355	
<input type="checkbox"/>	18601369	SILVAD	Issue PS118 Notice		PS118Notic	188356	
<input type="checkbox"/>	19078874	SILVAD	Release for Refund		PS118Notic	188357	
<input type="checkbox"/>	17830427	SILVAD	Release for Refund		PS103Notic	188366	
<input type="checkbox"/>	34931643	SILVAD	Issue PS118 Notice		PS118Notic	188370	
<input type="checkbox"/>	34578482	SILVAD	Issue PS118 Notice		PS118Notic	188373	
<input type="checkbox"/>	34114772	SILVAD			PS118Notic	188381	
<input type="checkbox"/>	51257033	SILVAD			PS118Notic	188395	
<input type="checkbox"/>	49032889	SILVAD			PS118Notic	188400	
<input type="checkbox"/>	63007312	SILVAD			NO_ISD	188401	
<input type="checkbox"/>	6622338	SILVAD			PS118Notic	188408	
<input type="checkbox"/>	3747	SILVAD			NO_ISD	188412	
<input type="checkbox"/>	34325	SILVAD	Release for Refund		PS118Notic	188421	
<input type="checkbox"/>	65883	SILVAD	Release for Refund		PS118Notic	188422	

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# Manual Review Process



DiscoverTaxWebClient - Microsoft Internet Explorer

Address: https://dor-dtaxapps.dor.state.ma.us:8443/ThinClient/WebClient/DiscoverTaxWebClient.aspx?usinglast=true

DiscoverTax - Selection Result Details

Manually Review Refund Queue and Apply Decision Result Details (#25715)

Display relevant data for each Refund request

Note out of state addresses

CITY	STATE	CREDIT1	WH_CREDIT_101	REFUND_REQUEST	WH_CREDIT_PER	BALANCE
BOSTON	MA	\$137.00	\$1,254.00	\$137.00	\$1,254.00	(\$137.00)
HUDSON	MA	\$445.00	\$445.00	\$445.00	\$445.00	(\$445.00)
STILLWATER	OH	\$0.00	\$515.00	\$0.00	\$515.00	(\$111.00)
BROOKLINE	MA	\$0.00	\$895.00	\$0.00	\$895.00	(\$204.00)
LOWELL	MA	\$854.00	\$1,258.00	\$854.00	\$1,258.00	(\$854.00)
SPRINGFIELD	MA	\$0.00	\$288.00	\$0.00	\$288.00	(\$253.00)
HAYDENVILLE	MA	\$80.00	\$241.00	\$80.00	\$241.00	(\$80.00)
BOSTON	MA	\$0.00	\$286.00	\$0.00	\$286.00	(\$354.00)
BELGIUM	FC			\$138.00	\$1,215.00	(\$138.00)
COLORADO SPGS	CO			\$206.00	\$965.00	(\$206.00)
EVERETT	MA			\$435.00	\$508.00	(\$435.00)
FPO	AP			\$198.00	\$1,005.00	(\$198.00)
MILTON	MA			\$234.00	\$4,653.00	(\$234.00)
MCBH K BAY	HI	\$330.00	\$330.00	\$330.00	\$450.00	(\$330.00)
CAMBRIDGE	MA	\$0.00	\$411.00	\$0.00	\$411.00	(\$308.00)
SARATOGA	CA	\$0.00	\$74.00	\$0.00	\$74.00	(\$75.00)
S BARRE	MA	\$205.00	\$1,076.00	\$205.00	\$1,076.00	(\$205.00)

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# Decision Management Functions



- Intercept “events” and hold for a decision
- Queue requests and process asynchronously to accommodate:
  - Volumes and throttling of peak processing
  - Adaptability and changes to rules without disruptions
- Assemble data, derive elements, and evaluate decision rules
- Provide techniques for manual review and intervention
- Integrate back to requesting service or system to execute decision
  - For example: Hold for review, Release for refund, Issue notice
- Maintain audit trail history of all queued events and decisions made
- Discern various downstream outcomes
  - For example: No response, adjusted return, refund issued
- Provide analysis reports to assess decision effectiveness
  - Model decision vs. manual decision
  - Various outcomes/results by decision

# Statistics from 2007 Filing Season



Total refund request returns processed (3,268,342 returns in total; 74.8% are refund requests)	2,328,454 (~\$920M in refunds)
Among refund requests, total returns pre-validated and therefore unaffected	2,115,698 (90.9%)
Among refund requests, total returns NOT pre-validated and queued for refund fraud model evaluation	212,756 (9.1%)
Total returns queued for evaluation but then released (~67% automatically)	163,906 (77%)
Total returns queued for evaluation and issued a notice requesting additional information from taxpayer	48,327 (23%) (\$25M in refunds)
Total returns with inactivated WH and EI credits	24,145* (fewer returns) (\$14M)
Total returns with inactivated credits that ultimately responded and received some refund amount	4,499* (fewer returns) (\$2M)
Average turnaround time between queued for evaluation and then released for refund (automatically 67%, manually 33%)	2.1 Days
Average turnaround time between queued for evaluation and then manually reviewed and issued a notice requesting more information	4.9 Days
Total criminal activity thwarted due to enhanced deterrence	Unknown

## Anecdotal Results



- Patterns identified through manual review could then be researched in the warehouse to identify other possible cases
  - Several falsified returns with large requested refunds, all from the same or similar address
  - Search for common schemes to identify potential criminal rings
- Cases referred for criminal prosecution
- Acceptable rate of released refunds after noticing and corresponding with taxpayer
- Limited negative publicity

## Key Challenges



- ITIN vs. SSN issue
- Name matching approaches and need for new “possible match” criteria
  - Opposite of the existing, conservative approach used to assign new information to an entity portfolio in the warehouse
- Maintaining *currency and quality* of external data in the warehouse used to support decision-making
- Managing and conducting the large volume of manual review activity
  - 80,000 returns reviewed before notice was issued or refund was released
  - 1,000-2,000 per day at the peak
- Processing inbound correspondence and phone calls from notice recipients and conducting audit examinations to eventually either: release refunds or issue adjustments
  - 20,000+ pieces of correspondence
  - 30,000+ phone calls

## MA DOR Plans for 2008



- Starting preparations now
- Apply outcomes from 2007 filing season
  - Additional “pre-validated” entries for taxpayers who received notices and interacted with the DOR
  - Additional refinement to rules for automatically releasing refunds
  - Additional attempts to find “near matches” against other data
  - Increased automation of decisions to hold refunds and issue notices, *without requiring manual review*
- Reduced staff – less manual review
- Continue to adapt and expand services

## What does the future hold?...



- Increased electronic data sharing and therefore improved opportunities to confirm the identities of valid taxpayers
  - State-to-state exchanges (e.g., to confirm non-resident refund requests)
  - Other agencies (e.g., motor vehicle licenses)
  - Payer reporting (e.g., W-2s, 1099s, etc.)
  - Federal data (e.g., issuance of valid ITINs, valid SSN/Name combinations from SSA, near real-time data exchanges, etc.)
- Increased automation of desk examination *prior* to posting and refund processing, given:
  - Improved *technology*: data availability, processing capacity, *decision management services*, and integration options (e.g., web services)
  - Increased validation across: employer withholding tax payments, employer-issued W-2s, and taxpayer-claimed withholding credits
- **Increased fraud schemes**: more sophistication, exploiting web-based filing channels, from other states and foreign countries, etc.



## *Mission Statement*

“Assist revenue and labor agencies to maximize collections, increase compliance, improve customer service and streamline operations through the use of enabling technologies, in particular, integrated tax, compliance management and tax data warehouse solutions”

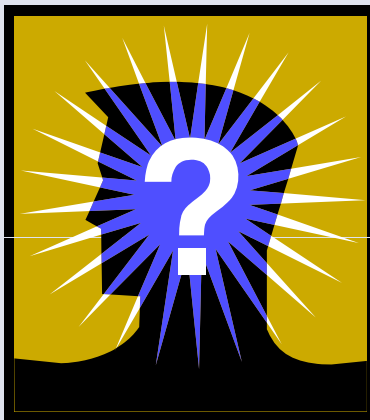


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- Incorporated in May, 1996
- Headquartered in Pembroke, MA with a Solution Center in Roseville, CA
- Dedicated exclusively to providing products & services to tax agencies
- Approximately 170 employees with over 650 combined years of tax and labor systems consulting
- Deep tax administration and compliance management domain expertise



# Questions



## Contact Information

