



Compliance, Assistance, and the SmartCard

Kathleen M. Carley, Neal Altman, Michael Martin, Mike Kowalchuk – Carnegie Mellon
 Joanne Meikle & Traci Suiter – IRS Opera

Smart Card



Purpose: a tool for the presentation and exploration of taxpayer issues and the effect of services on taxpayer behavior.

- Data is organized by urban areas (cities):
 - Cities are individual MSA/PMSAs as defined by the U.S. Office of Management and Budget (OMB)
 - 297 cities are included in the tool
- Data is summarized at the regional and national levels.

Data Sources: SmartCard combines real data, simulation outcomes, and model predictions of taxpayer behaviors.

- Real data:
 - U.S. Census Bureau:
 - Public Use Micro-Sample (PUMS) for individual and household characteristics
 - Additional sources for literacy, networks
- Modeled information
 - Literacy
 - Taxpayer errors
 - CMU Construct simulation
 - Impact of service activities on taxpayer behavior
 - Utilization of paid preparers from IRS



Design Principles:

- Immediate usability
- Utility
- Customization
- Portability
- Extensibility

- Easy to integrate new empirical data
- Periodically replace simulation results as improved forecasts become available

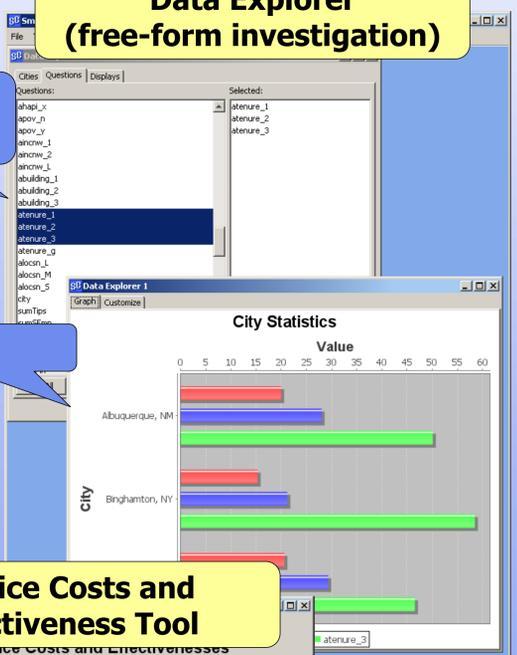
Potential Uses:

- IRS personnel are interested in identifying the best channels for education and outreach for a city.
- IRS personnel are doing training in new city and want to orient remarks to that city.

Data Explorer (free-form investigation)

1. Select variables, cities.

2. Graph.

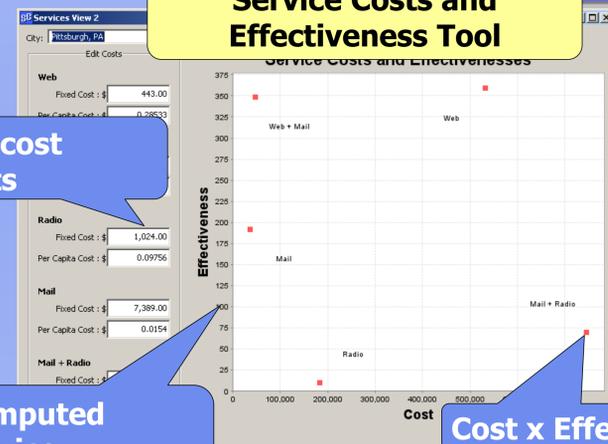


Service Costs and Effectiveness Tool

User cost inputs

Computed service effectiveness

Cost x Effectiveness



City Summary Report (Columbus, Ohio)

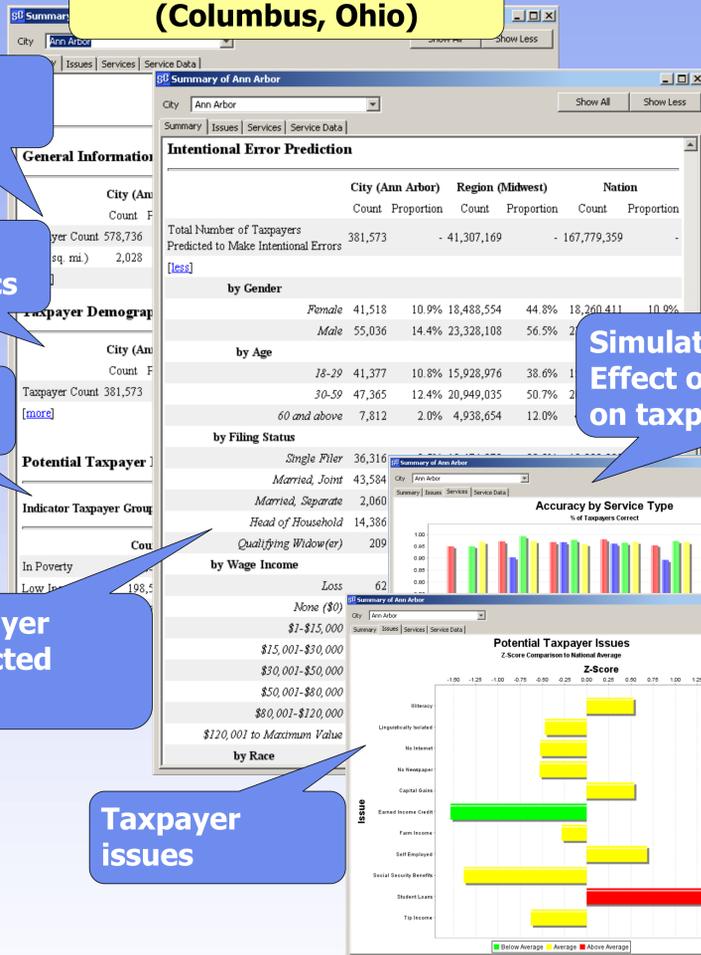
General city information

Taxpayer demographics

Taxpayer issues

Taxpayer predicted errors

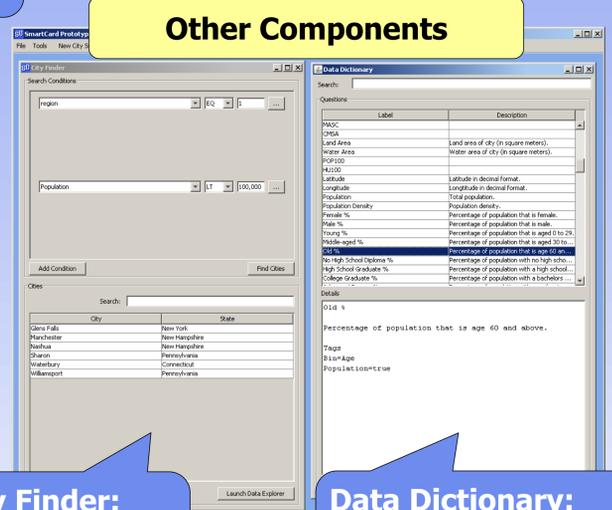
Taxpayer issues



Simulation: Effect of IRS services on taxpayer accuracy

City Finder: Select cities by data searching

Data Dictionary: Variable definitions and tag information



For more information contact:
 Dr. Kathleen M. Carley
 Email: kathleen.carley@cs.cmu.edu
 Telephone: (412) 268-6016
 Fax: (412) 268-2338

This work is part of the Taxpayer Simulation and the Dynamics Networks projects at the center for Computational Analysis of Social and Organizational Systems (CASOS) of the School of Computer Science (SCS) at Carnegie Mellon University (CMU). Support was provided, in part, by IRS Opera, ONR - N00014-06-1-0104, and the NSF IGERT DGE-9972762. The views and proposal contained in this document are those of the author and should not be interpreted as representing the official policies, either expressed or implied, of the Internal Revenue Service, the Office of Naval Research, the National Science Foundation, or the U.S. government.