# INFORMATION RETURNS DATABASE LARGE TABLE REDESIGN
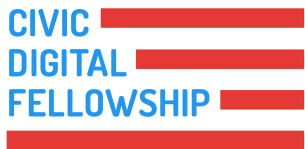
## Affordable Care Act Compliance Validation (ACV) Team
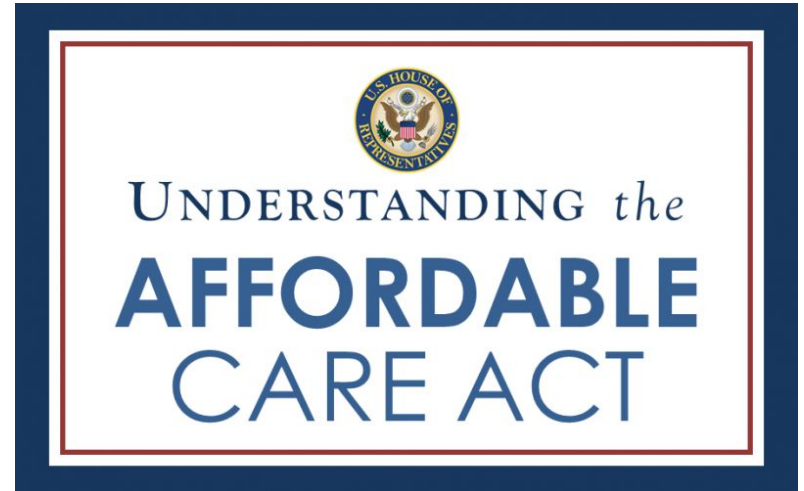
Robert Fritch —Chief, Etrak Program Office

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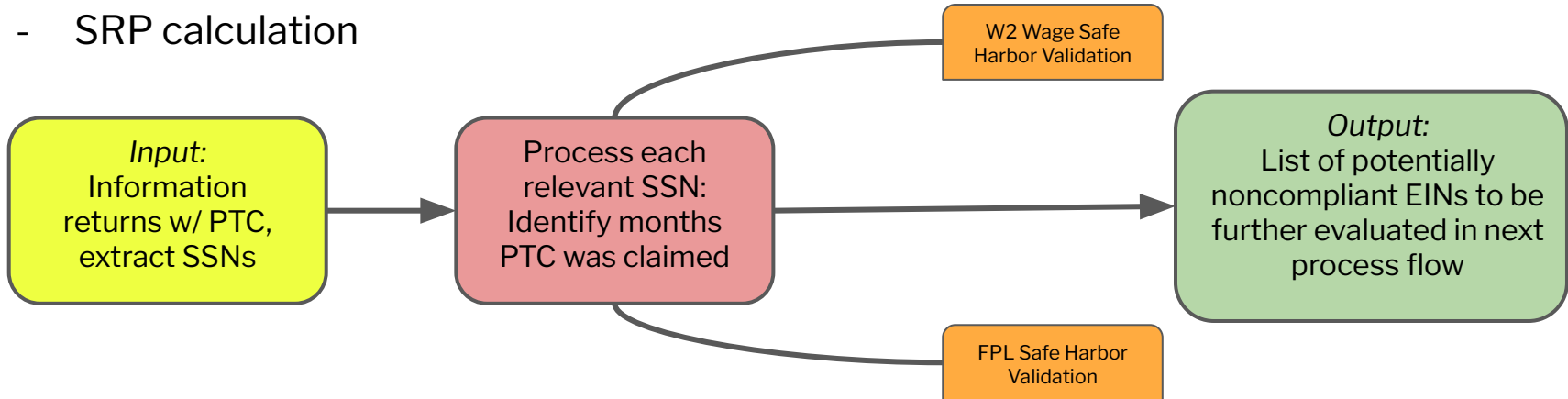ZANE HARRISON
Duke University
Computer Science

# ACA COMPLIANCE VALIDATION

- Affordable Care Act Compliance Validation (ACV) System

- ACV 1.0

  - Reconciled individuals

  - Coverage compliance calculator

- ACV 2.0

  - Applicable large employer (ALE) compliance

  - Section 4980H (a) and 4980H (b)

# ACV 2.0 PROCESS FLOWS

- Identify potentially noncompliant EINs

- Evaluate EIN compliance

- Evaluate W-2 Wage and Federal Poverty Line Safe Harbor Validation

- SRP calculation



*Simplified representation of "Identifying EINs" process flow*
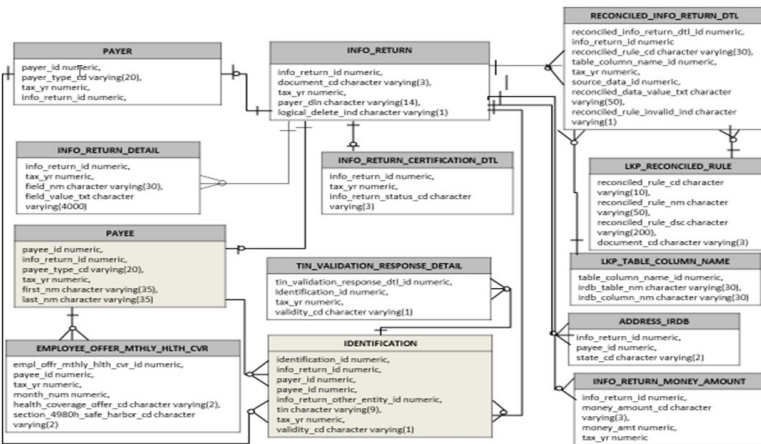
# IRDB LARGE TABLE REDESIGN

- Information Returns Database (IRDB) is used in ACV processes

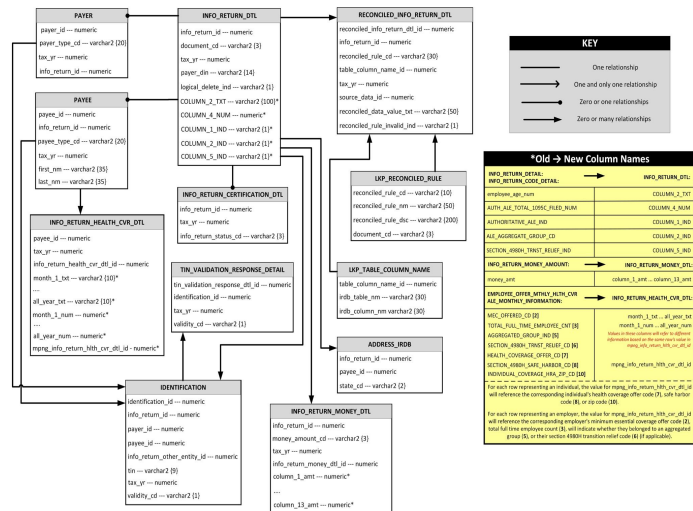| Table Function | Current Row Volume | New Row Volume |
|---|---|---|
| Sore information return amounts | 6.3 billion | 0.5 billion |
| Store health coverage details | 13.1 billion | 1.96 billion |
| Store information return details | 1.2 billion | 0.8 billion |

- **Newer, denormalized structure:**

- Minimize need for table joins
- Fewer tables
- Simplified queries

- IRDB storage reduction
- Network traffic reduction
- Overall performance improvement

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# SDSR FIGURES

- IRDB changes reflected in Simplified Design Specification Report (SDSR)

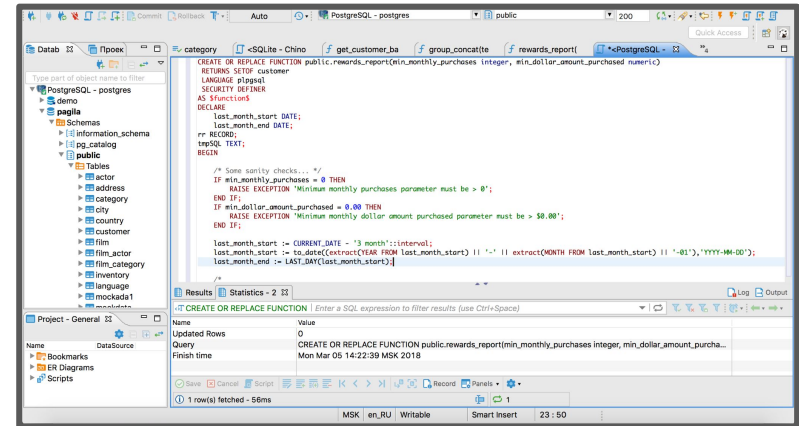- Updated entity relationship diagrams



*Original Database Representation*

*Updated Database Representation*

# DATA STORING PROCEDURES

- ACV application storing procedures need to be compatible w/ new IRDB structure

- DBeaver used as database management software

- Data procedures written in PostgreSQL

- Gained experience with relational databases and database denormalization





*Sample DBeaver Code/Interface *Not real IRS data*

# WHAT'S LEFT TO BE COMPLETED

- Complete new logic for data storing procedures

- Achieve compatibility with IRDB structural changes

- Eliminate the need for the old database structure to be maintained

# ACKNOWLEDGEMENTS

**Robert Fritch** - *Supervisor*

**Omar Hernandez** - *Supervisor*

IRS CONTACTS:

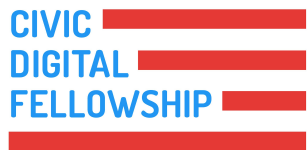**Andrew Beckwith**

**James Huskey**

ACV TEAM:

**Patrick Clark**          **Geeta Guntor**

**Lionel Orozco**          **Alvin Chou**

**Lan Doan**

**Amitabha Sur**

**Satish Reddy**

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Thank You!          Questions?