Tools and Techniques for the Data Pipeline Updates from XBRL US

XBRL Filed Data

XBRL API

Public Filings Database

Data Community

What's next?

Q&A

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XBRL Filed Data updates - global functions

Unified codebase – Excel and Google Sheets have the same format and functionality

Dynamic dropdowns – filtered options cascade from higher selections (ie. Report Source)

Accessible dropdown queries – return the filtered dropdown query to the spreadsheet

SQL output option – print the equivalent SQL statement for the Public Filings Database

Unique filter – remove 'duplicate' results from the query

*Increased rows returned for Power User and all Organizational Memberships to **5,000 records***

XBRL Filed Data updates - global functions

Unified codebase – Excel and Google Sheets have the same format and functionality
=showData() in Google OR =XBRL.showData() in Excel

XBRL Filed Data updates - global functions

Dynamic dropdowns – filtered options cascade from higher selections (ie. Report Source)

XBRL Filed Data updates - global functions

Accessible dropdown queries – return the filtered dropdown query to the spreadsheet

XBRL Filed Data updates - global functions

SQL output option – print the equivalent SQL statement for the Public Filings Database

Output will need quotes reduced to single and removed from beginning and end of statement

XBRL Filed Data updates - global functions

Unique filter – remove 'duplicate' results from the query

XBRL Filed Data updates – new features

Endpoint options:

- **Cube** – returns content of a specific table or tables (cube)

- **Cube-dimensions** – returns details of dimensions of a specific table

XBRL Filed Data updates – new features

Cube endpoint – returns content of a specific table or tables (cube)

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Cube-dimensions endpoint – returns details of dimensions of a specific table

XBRL Filed Data updates – new features

Validation options:

- **FERC** – Members and public utilities can check filings created with 2022 taxonomies against the rules published and required by the Federal Energy Regulatory Commission

- **ESEF** – Anyone registered with a company email (ie. not Gmail, Hotmail, etc.) can use Data Quality Committee checks to scan annual reports required by the European Securities and Markets Authority (https://esef-dqr.xbrl.org and https://filings.xbrl.org)

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Additional XBRL API updates

- Added documentation for **cube** and **cube-dimensions** endpoints

- Updated existing documentation so available fields on the **document** endpoint are displayed:

document.content	entity.name
document.documentset	entity.scheme
document.id	report.filing-date
entity.cik	report.hash
entity.code	report.id

Public Filings Database updates

Updated the Entity-Relationship Diagram and posted it for XBRL US Members –
https://xbrl.us/home/use/filings-database/documentation

XBRL US Database Documentation

The XBRL US Database contains data from SEC and FERC financial reports in a relational model. The data is sourced from RSS feeds provided by the agencies. The database contains data from the beginning of the mandatory SEC filing period, which started April 15th, 2009 and 10+ years of FERC filings (starting with 2011). Filings from the previous voluntary filing period are not included.

The database contains two schemas: "public" and "xbrl_public". The "public" schema contains all the data from the SEC filings. Access to this schema is read only. The data in the "public" schema is updated as filings are processed. Generally, the RSS feed is checked every 15 minutes for new filings.

The "xbrl_public" schema is provided as a convenience to users to store views and database functions. Any information stored in the "xbrl_public" schema is viewable and editable by all users.

Although the database is geared towards containing SEC filings, the data model is mostly based on generic XBRL (including XBRL dimensions).

Resources:

- Documentation (updated April, 2017)
- Database Changes (implemented June, 2017)
- Entity-Relationship Diagram (updated June, 2022)

Using Data

Database of Public Filings

SQL Queries – XBRL US Database

Protected: XBRL US Database Documentation

Database Snapshots (AWS) and Hosted Instances

The XBRL API

XULE, an open-source processor

XBRL Data Community

Updates

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Public Filings Database updates

Data Community updates

- Refreshed all staff-developed spreadsheet templates and removed outdated resources

- Added a loop to all Python Jupyter Notebooks so the script returns all available data

- Posted a new Jupyter Notebook in Python to support a Case Study on effective tax rates

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What's next?

- Normalized views of Balance Sheet and Income Statement (available as an add-on for Members at the Power User level and above, including all organizational Members)

- ESEF data added to the Public Filings Database

- Dimensional data re-imagined for spreadsheets

- Taxonomy viewer add-on for Excel and/or Google Sheets

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Questions?